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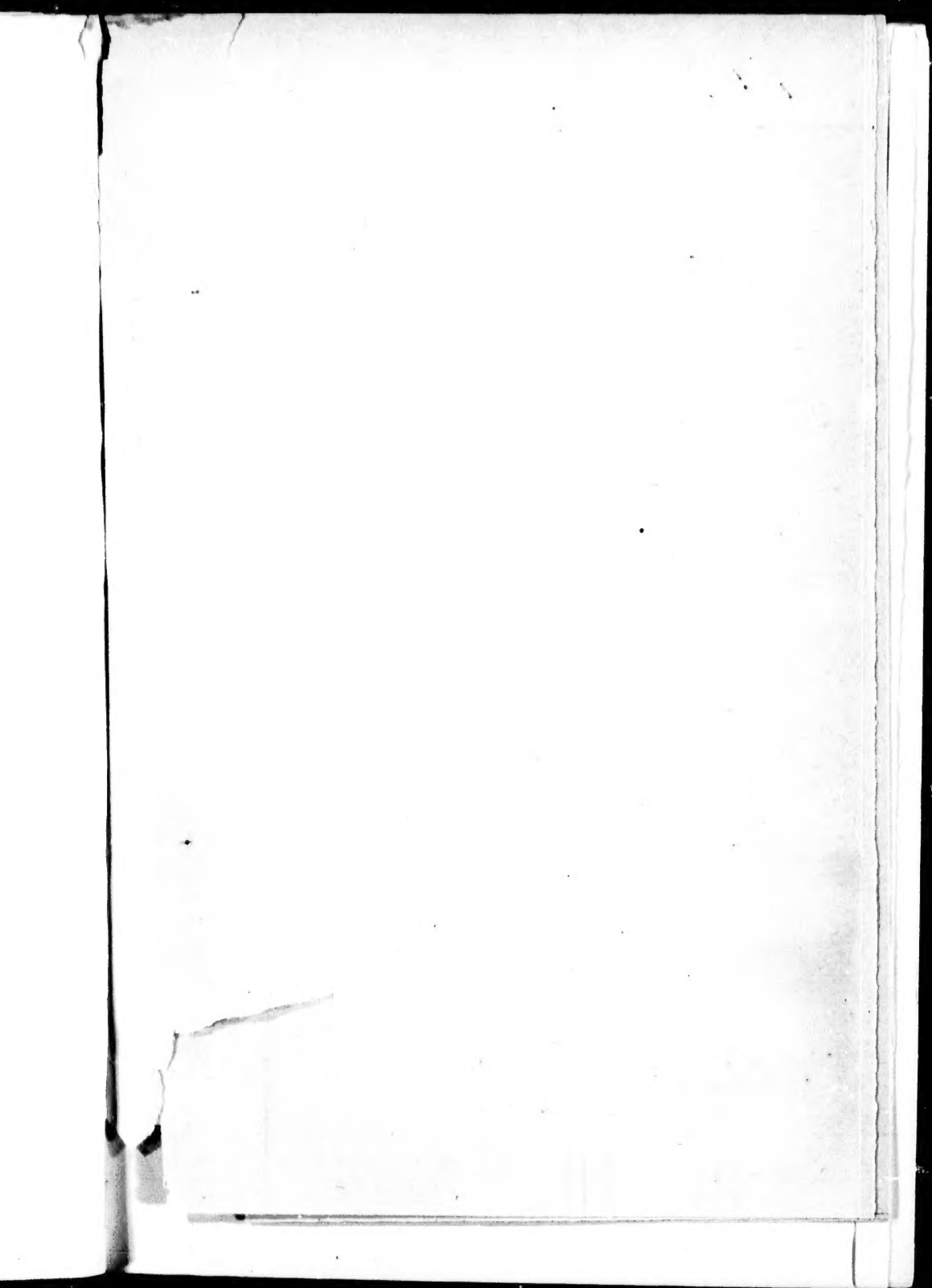


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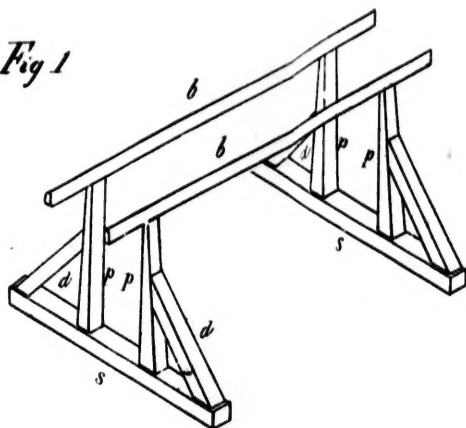


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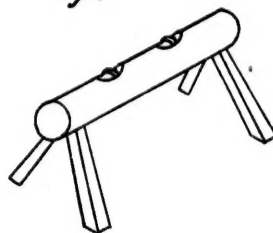


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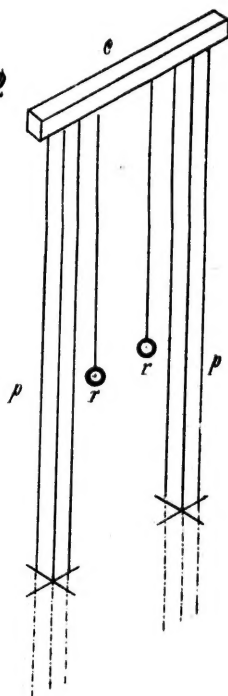


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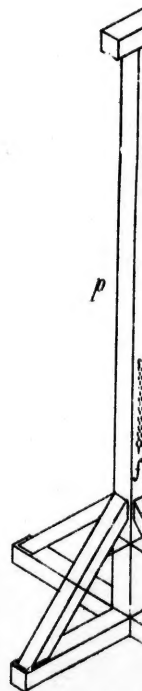
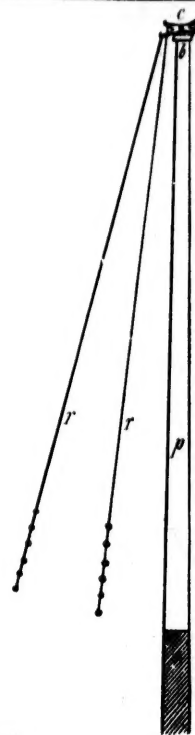
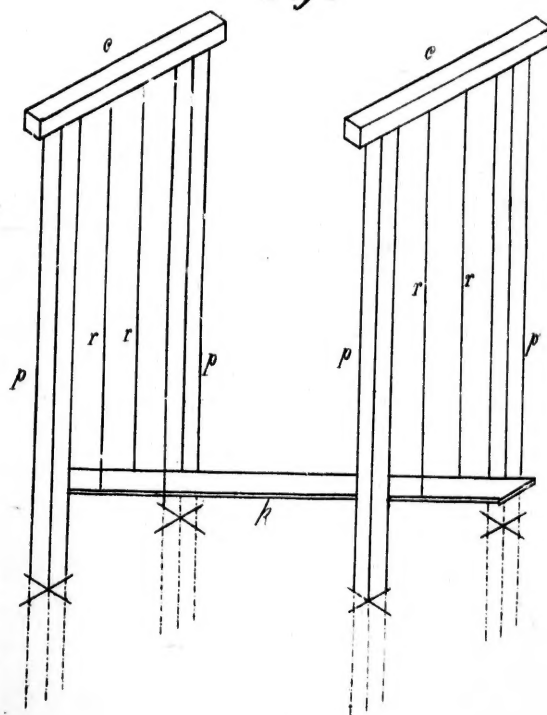


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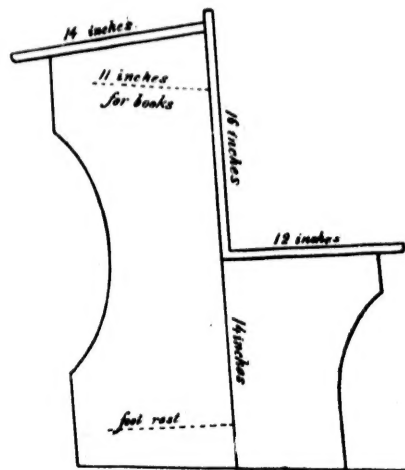
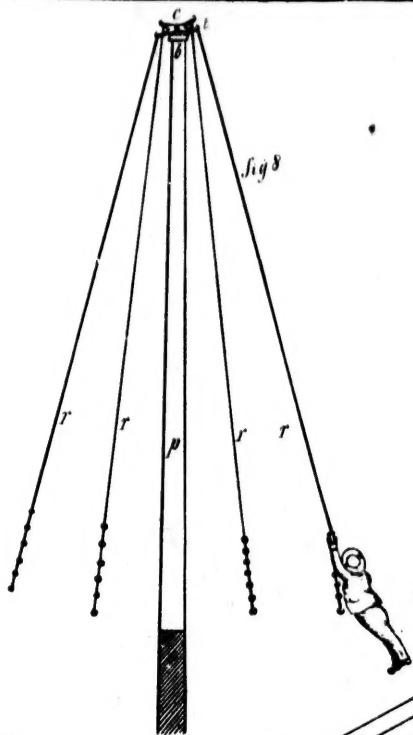
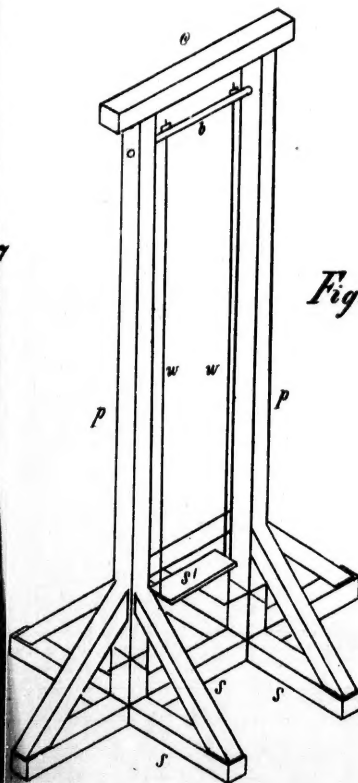
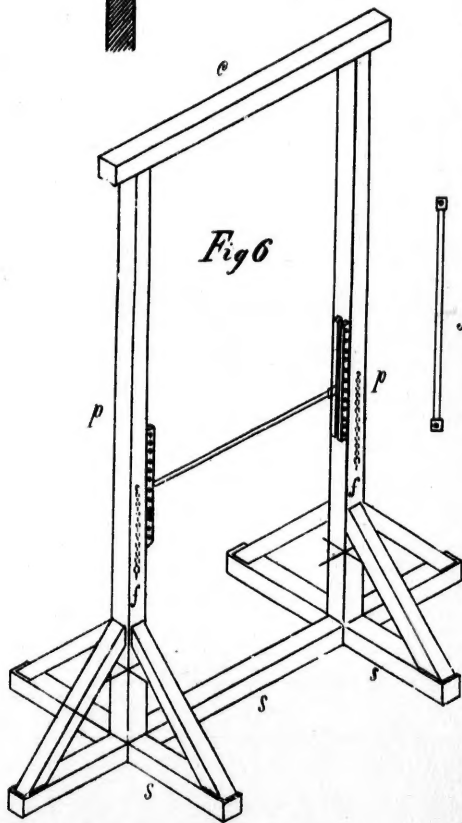


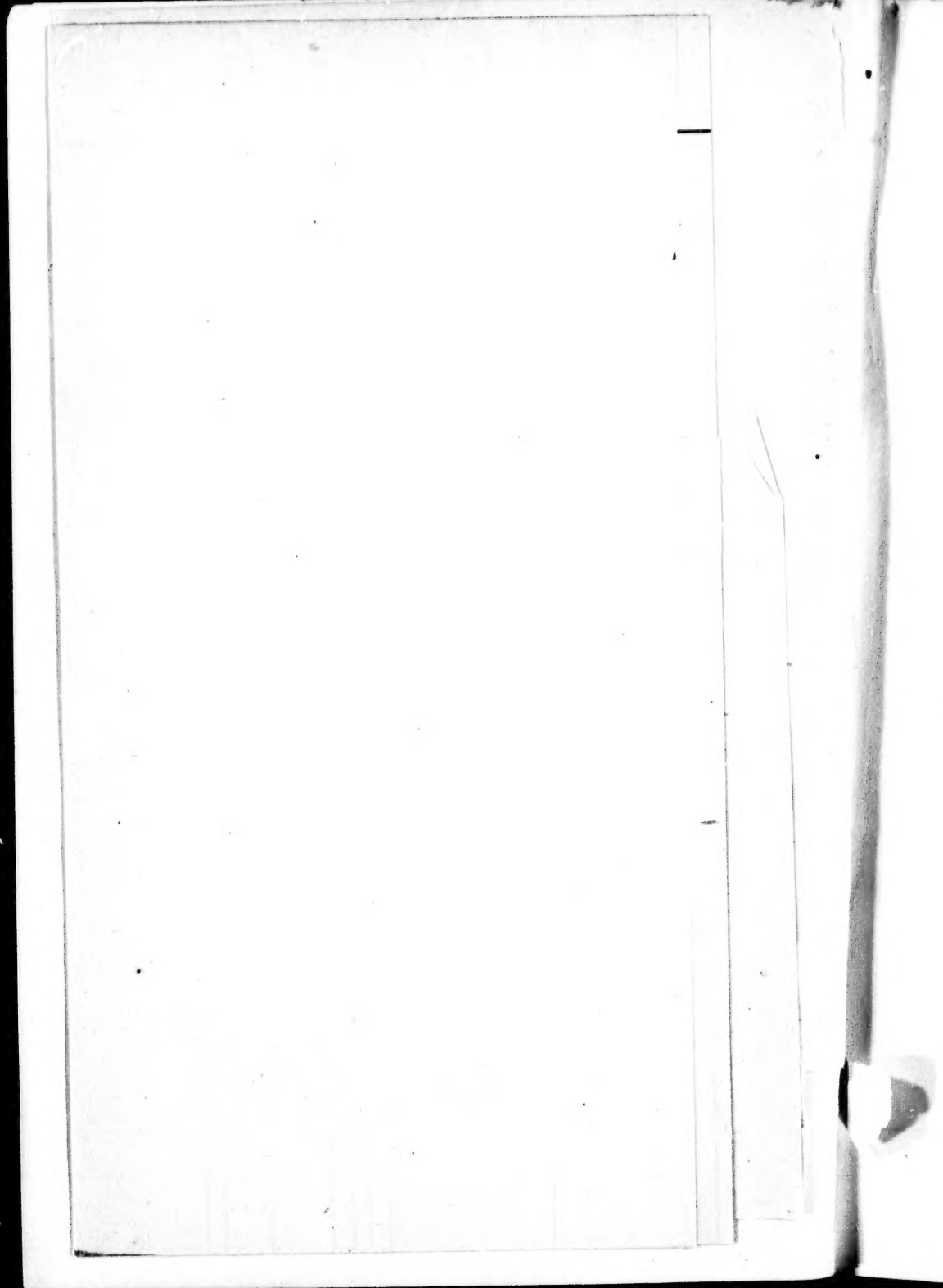
Fig 13

Fig 6

fig 7

Fig 12





THE
ART OF TEACHING

A MANUAL

FOR THE USE OF TEACHERS AND SCHOOL
COMMISSIONERS,

BY

FREDERICK C. EMBERSON, M. A.

Scholar and Greek Exhibitioner of Wadham College, Oxford;
late Commissioner to Inspect the Model and High
Schools of the Province of Quebec.

NEW EDITION WITH APPENDIX.

MONTREAL:
PUBLISHED BY DAWSON BROTHERS.

1883.

ENTERED, according to Act of Parliament of Canada, in the year
1877, by DAWSON BROTHERS, in the office of the Minister of
Agriculture.

ENTERED, according to Act of Parliament of Canada, in the year
1883, by DAWSON BROTHERS, in the office of the Minister of
Agriculture.

"*Rerum undique compilatarum clamosus venditator.*"

—DONALDSON.

In other words:

Ego apis Matinæ

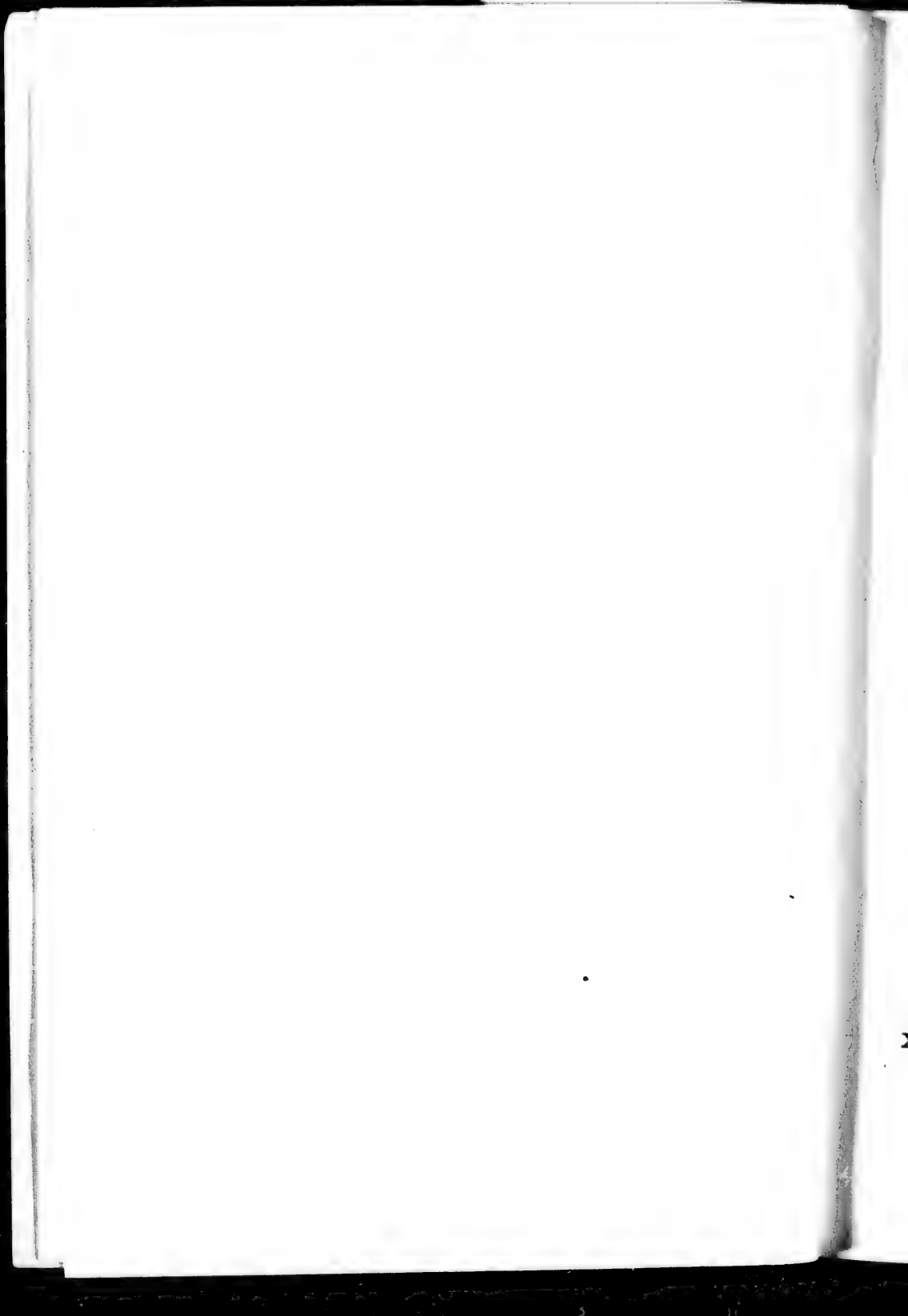
More modoque

* * * per laborem

Plurimum * * * operosa parvus

Carmina fingo.

—HOR. CARM. 4. ii. 27.



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Those using this book in preparation for an examination in the Art of Teaching are advised to select chapters I., II., X., XI., and XVIII. for special study. The rest of the volume they might read once or twice, just as they would any other dull or amusing book.

The surest hopes of success in an examination, as in everything else, are founded on full preparation and frequent practice in being examined. The following rules may be found useful:

1—Answer the questions in order of seeming difficulty; doing those first which you think you know best and on which you can write most fluently. Directly you get puzzled or confused over anything, lay it aside till last.

Reserve twenty minutes at the end of the morning or afternoon to read over and correct your papers. You will probably find in them many clerical or other errors.

3—Use plenty of paper, writing with an ample margin and only on one side of the sheet. In Arithmetic especially the use of plenty of paper is a great aid to clearness and correctness.

4—In Arithmetic write the word "Answer" under each example, and put what is the answer, opposite to it, underlined.

INTRODUCTION.

To those who are likely to be nervous we would say "Do n't." There is nothing worth being nervous about or fretting over in this world, unless it be sin and debt. Some say that to take some deep inspirations with closed lips will check nervousness.

Do not work very hard the day, or indeed the week previous to an important examination, and go to bed betimes the night before. If an examinee knows his work well he will be pretty sure to write correctly, though he be so nervous as hardly to know what he is writing. An experienced examiner can mostly distinguish the mistakes of nervousness from those which betray ignorance.

In conclusion, we would give the teacher the following random hints, which may, perhaps, be the better remembered for being put separately.

Beware of the habit of scolding, or complaining of the general stupidity of your scholars. You will meet with temptation to "scold" all day. Do not yield to it once.

Have *no* weak spot in the orderliness of your school-room. Let your very "pointer" be neat and made for its purpose.

The self-denial required (if any) to become a teetotaller will, we have observed, in the case of teachers, be repaid, in Canada, at least five hundred fold.

Your excellence, as a teacher, should be measured by the progress of the stupid and the dull among your pupils. They claim your *special* attention. The clever ones will get along fast enough without it.

The beginnings and foundations of everything require the most careful filling in. For instance, Addition is used in actual life more than all the other rules of Arithmetic put together. In practising it, let your scholars first add each column upwards (writing under it, in very small figures, what they have to carry) and then add it downwards.

The "knack of teaching" is to use the known to explain the unknown;—to be *sure*, that is, that your

INTRODUCTION.

pupils understand every word you say; in explanations to use only words and ideas which are most familiar to them; to break up every advance in knowledge into the shortest and easiest steps. To effect this your lessons must be carefully prepared beforehand and with especial regard to the *ignorance* of the classes for which they are intended, and you will find it a useful hint to practise the art of speaking and writing as much as possible in words of one syllable.

The author begs leave to dedicate this book to

W. A. Y., W. J. E. AND R. W. H.

as he foresees no other way of showing any acknowledgment, however feeble, of past exceptional kindnesses.

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CHAPTER I.

THE ART OF TEACHING EFFICIENTLY AND WITH EASE.

"At the first it is no great matter how much you learn but how well you learn it."

COLLOQUIES OF ERASMUS

The great way to teach efficiently is to be thorough. Choose for a motto "Teach little, and teach it well." Give the scholars short lessons and see that they are learnt perfectly. Make them give the substance of each lesson in their own words after finishing it, and see that there is not a single word in the lesson that they do not thoroughly understand. In geography and history go over each lesson, rapidly, when it is set, explaining any very great difficulty, marking any sentence worth learning by heart in it, and giving them the right pronunciation of the proper names, so that they will have nothing to unlearn.

Point out the proper names, dates, &c., which they need *not* learn, if any. This need not take more than three minutes, to be thus spent at the end of each lesson in preparation for the next, and it will save at least ten minutes' labour at the aforesaid next lesson. To impress any particular proper name on a class—*e. g. Vasco di Gama*—make the class spell it simultaneously. And it is well sometimes to make a class write leading names on their slates.

Another great means of efficiency is to be constantly reviewing back work. Review much of the week's work briefly at the end of the week. Review again at the end of the month, the term, and the half year. Have a grand review and examination at the end of the year. Written examinations are very potent to stereotype on the mind all knowledge acquired by it.

They also expose ignorance, and show a boy how much less he knows than he fancies he does. Hence they stimulate him to go over the main points which he wishes to learn, over and over again with extra exactness. Give good marks for every lesson, and give your scholars the marks of the school, or part of them, to add up on their slates at the end of each week, so as to interest them in the number of good marks they get.

"Slow and sure," should be the great motto of a teacher. Force the scholars back rather than onwards, in the matter of text books, (Readers especially) and give them lessons well within their capacity.

Thoroughness is the great secret of efficient teaching. Now, thoroughness implies the keeping at one item—*e. g.* the practice of addition—a long time. To prevent the class from getting wearied with this, endless variety in the way of handling the subject must be ensured. For instance, in teaching addition make the class get "the addition table" orally by heart. Make them bring the same sums at the same time, to see who is most correct. Race them against time. Make them work in ink and see who is the neatest. Make up ingenious questions; add the ages of the class and the years each member of it was born in. Suppose a scene, as that they were going out shopping, and add their expenses, &c., &c.

The great secret of ease in teaching is infinite unruffled patience. Never be in a hurry;—more haste less speed. Never be discouraged. Do your best and leave the rest. Amid the distractions of a school-room try and keep your mind calm and collected. Remember that, if you choose, there will always be a quiet little Goshen of light in the recesses of your own heart to which you can retire, however much confusion and darkness prevail around you.

Remember that you, too, were a child, and try and enter into sympathy with the minds of your children. Punish severely if need be, but always calmly, and

never in anger. Remember that you did not make your scholars, and are not responsible for any of their stupidity.

Prepare your lessons and the questions you mean to ask, thoroughly. Do not pretend to knowledge you do not possess. This is as unwise as it is dishonest. You often gain the respect of a class by confessing that you do not know everything.

You are a gardener and your scholars are your flowers. Do not for ever keep grubbing with your eyes fixed on the ground pulling up weeds, but occasionally rest yourself to take an enjoyable look at some brighter flower or more pleasing parterre. Picture the little bright faces before you as men and women grown, living, then, happier and more useful lives as citizens and mothers, owing to your exertions.

Learn the art of discipline. If you fail once, try and try again. Study the character of each scholar. Look upon his heart as a fortress to be stormed in some special and peculiar way, so that you may command his affection and obedience.

The reward of teaching is to find one unaccustomed to sympathy and kindness, and to have the pleasure of surprising the timid sufferer by kind words and cheering looks, and of seeing in his very face the signs of a new happiness that owes its birth to you. An ounce of praise goes as far as a pound of blame, and gives the greatest encouragement to those who are the least gifted by nature, and therefore need it most.

Always try to be cheerful; never be morose, and above all, never be sarcastic. Find some practical rules for maintaining cheerfulness.

Punctuality in the teacher is a great means of ease in teaching. Its importance can hardly be over-rated.

Perfect quiet in a school-room is a mighty help to teach with comfort and a tranquil mind. To secure perfect silence while you are teaching, it may be found useful to allow the scholars a minute or two at

the end of each lesson, each hour or each half hour, to speak quietly to each other and ask each other necessary questions.

After all, we poor mortals depend most humiliatingly upon externals. Perhaps the greatest means to ease in teaching is a well-appointed school-room. To secure this you may often have to coax the school authorities. These are also bound to give the teacher rules for his guidance. It is well to have some such rules posted in the school-room and signed by the Chairman of the Commissioners. By this means the teacher can have undeniable authority to have a written excuse under the parent's signature brought by every absentee. This will be a great check on that irregularity of attendance which is so discouraging and disturbing. It is well to have the sanction of the trustees for requiring the elder scholars to teach the younger ones at regular intervals. If it be objected that scholars go to school to learn and not to teach, explain that they often learn more when teaching than at any other time. The principal of a large institution should also have authority to keep a stock of books and stationery on hand so that he can supply the scholars (for cash down) when required. And every teacher should be instructed not to teach any child who is without the prescribed text book, and not to permit two brothers to look over the same book.

A teacher should always have some little scheme of self-improvement going on, so as not to allow his mind to be injuriously engrossed by school work. The mind must never be allowed to harp on one string or confined to one horizon. Hence, the teacher should be as chary as possible about taking school work home with him.

Let us summarise. To teach efficiently be thorough. To teach with ease, be calm, self-possessed, never in a hurry, never over-anxious, but earnest, punctual and well prepared with your day's work.

CHAPTER II.

READING.

In teaching children their letters, it is best to begin with one at a time. Take those of the simplest form—"round o," "dotted i," "crooked s," "crossed t," &c.,—first. Let the child take some time to learn each, singly, at his seat, and copy each on his slate as he learns it. Reading before knowing the letters,—“the touch and say method,”—is highly praised by those who have tried it. Here, again, we must begin teaching easy words, and those one at a time. We may be teaching children this and teaching them their alphabet at the same time. We thus add one to the kinds of lessons which we can give to very little children, which is a great advantage.

Three rules for reading are often useful to give out before a lesson:—1. Read slow. 2. Read loud. 3. Read as if you were telling somebody something.

In teaching most country schools, the main thing is to try every device to get your scholars out of a sing-song tone in reading. The most approved method of training even an advanced class now seems to be, for the teacher first to read over the piece aloud to the class with the proper enunciation and pauses, and for the class then to repeat it simultaneously, sentence by sentence, reproducing his exact tones and accent—in fact mocking him. Recitations at public examinations and prize-distributions, well practised beforehand, will work wonders, as also for the scholars to get up and act little dialogues.

There is no subject more important than Reading, and yet there is none which is, in general, taught more carelessly at our country schools. The great rule here as elsewhere is to be thorough, that is, to be “Slow and Sure.” Make your scholars read the same one piece again and again till they can read it with the most perfect ease and intelligence. Keep

them well *back* in the Readers they use, instead of pushing them on to the advanced numbers in the series. See that they thoroughly understand every word in the piece they read; and when they have finished it make them give the substance of its contents in their own words—firstly, with their books open, and then with their books shut. You may not always have time to do all this, but aim at doing it as much as possible. The pronunciation of the hardest words in their lessons should always be told to a class before they prepare the lesson at their seats. A child should never have anything to unlearn.

Never be satisfied till each scholar reads in a *pleasant* tone of voice.

Reading demands more patience from a teacher than any other study. Patience is the teacher's one crowning virtue. A reading class should not consist, if possible, of more than ten scholars. In hearing it, keep suddenly pouncing upon different members of the class, selected at random, to correct any mistake made by the scholar who is "being put on." This keeps the whole class on the *qui vive*, and they are learning to read during the whole half hour of the lesson instead of during the three minutes when they are being put on themselves.

WRITING.

In writing, legibility, or rather the "impossibility of being misread," should be the first aim. To ensure this (until our present semi-barbarous cursive alphabet be remodelled for the Universal International Alphabet of the Future!) the angular hand, Lord Palmerston's bugbear, which sometimes succeeds in making no less than ten letters out of the twenty-six, *all exactly alike* and utterly indistinguishable, must be sedulously eschewed. The "m's" and "n's" must join at the top and the "u's" at the bottom, and the "r's" be very carefully formed.

Legibility must come first, the possibility of future rapidity next, and elegance will come of itself. To have a plain alphabet, free from flourishes, painted on a board and put up in the schoolroom, and to make the boys copy the shape of their individual letters from this, might obviate the difficulty of getting good copy-books. Flourishes might be practised as a separate exercise to give a bold, free hand, but a child should surely be taught, from the first, to make his letters after one pattern, plain and simple. The advantage of the constant practise of round text copies to give a bold, free hand, does not seem as well recognised here as it is in England.

Of all things which need to be written legibly, a man's signature needs it most urgently. It is, after all, the most important part of a document, and cannot be guessed from the context like any other word. Signatures are sometimes so illegible that they have to be cut out and pasted on the envelope which contains the answer to a letter.

Three rules may be constantly given out in teaching writing:—1. Look well at the head line before each word. 2. Write slow. 3. Avoid blots.

Scholars must also be reminded not to scribble on the cover of their books. Good marks should be assigned to each copy done. Nine is a convenient maximum. To force children to write slowly, one plan is to make the class begin each line simultaneously. Then those who hurry have to wait, when they have finished their line, till the most painstaking calligraphist scholar has finished his, and their very impatience at this makes them more patient to take time over the writing of the next line.

Of course, in teaching beginners, we must commence with straight lines and easy curves, and then rise from middle-hand (or "round text") through large hand to small hand. Round text should be frequently practised at all times. Beginners should

frequently practise the writing of their names on their slates.

By purchasing the cheap and excellent "copy-slip books" published by the Buriand-Desbarats Company, sheets of foolscap stitched together may replace copy-books in the poorer districts. The spaces between the lines in ruled foolscap suit the size of round text and large hand admirably. Some of the leaves can be ruled vertically for the daily "bookkeeping-writing copy" as described under Book-keeping. Of copy-books, perhaps the middle numbers of Payson & Dunton's, and Nos. 3, 4 and 5 of the Spencerian Series, are the best.

The teacher should keep the copy-books, when not in use, and after they are filled, in her desk.

ARITHMETIC.

Here again, strangely enough, legibility seems a first and foremost necessity. One tithe of the mistakes in arithmetic, which bar progress and make that vexing which would otherwise be pleasant, are found to come from mistaking the 1, 4, 7 and 9 for each other in working sums on a slate. To prevent this, the "1" should be a single line, the "4" have a short cross-down stroke, and the "9" should have a curving tail.

The tables of multiplication and of the weights and measures can be taught to infants in amusing sing-song, accompanied in part with chest-expanding movements of the arms. It is hard to learn them in after life, while to have learnt them ineradicably is invaluable.

In manipulating a large class in Arithmetic the MacVicar apparatus is most useful. By it a class of mere children, at the St. Ann Street School, Montreal, did eighteen sums in addition of fractions in six minutes.

An "Addition Table" should be composed by the

teacher, and be frequently practised, as well as the Multiplication Table.

To help a child to learn the Addition Table, every Infant School should have an Abacus or "bead-frame." Even the Japanese use them. To arouse interest in the Multiplication Table make five heaps of beans with six beans in each. Mingle the heaps and count out the result and show that the Table is correct. Then make six heaps with five peas or beans, and prove that six times five is the same as five times six. By means of a box of cubes a class can see with their own eyes that the square of three is nine; that the square root of sixteen is four, and that a three-inch cube contains twenty-seven inch cubes. In teaching weights and measures it is well to have a two-foot rule and a set of weights with a pair of scales at hand, and let the class individually examine them, and then guess the size and weight of different objects in a room.

BOOK-KEEPING.

None should leave the highest or even the second class in a school without some knowledge of the rudiments at least of simple book-keeping and rendering of accounts. We have seen this most successfully taught as follows:

Assume the School to be a trading firm; imagine, daily, certain personages of local or historic importance, to buy, to pay, or be paid. Put these transactions into book-keeping language, and give it as an exercise in dictation for slate and copy-book successively.

For instance, say "Jacques Cartier has just come in and purchased 10 jars of lime juice at \$1 a jar. How do you put this into book-keeping language?" Some boy will answer, "Jacques Cartier to 10 jars lime juice at \$1., \$10.00." Write some other similar items on the black board and let it be an exercise in writing for the day, to be neatly copied, at odd mo-

ments, into a book neatly ruled for the purpose. This will teach bills of parcels, and make the scholars familiar with the chief names in Canadian History and their characteristic purchases, &c., &c. A Cash Account must also be opened, and imaginary payments and receipts entered, on one day in the week. Have one day in the week also for posting. The entries, exactly as they are to be made in the ledger, must also be written on the black-board, after their wording has been established by questions, &c.

The Cash Account and Bills Receivable and Bills Payable accounts often cause some difficulty which may perhaps be thus removed. On receiving money, say, "Mr. Cash Box I put \$5.00 into you; therefore you owe me \$5.00, and so I put \$5.00 to the *Dr. side* of your account."

On paying out \$5.00, imagine that you take it out of the Cash Box, and therefore *credit* "*Cash*" (*i. e.* Cash Box) with \$5.00.

On raising money on a note, imagine that you take a slip of paper out of an imaginary Bills Payable Box and realize, say, \$50 on it. Therefore you credit Bills Payable with \$50.00. On accepting a note in payment of an account imagine that you put it into a Bills Receivable Box and say, "Bills Receivable you owe me this \$50.00, and therefore I *debit* you with \$50.00." When you get cash for this note imagine that you take it out of the box and *credit* the Bills Receivable Account with the money you get for it.

SPELLING

is best taught where the classes write picked words from each lesson, instead of saying all of it. Few of us are *asked* to spell a dozen words in a year, and many are spelling words, while *writing*, several hours a day. If the scholars correct one another's slates, a large class may be ranked in a short time. Distinct advantage has been found to result, in Montreal, from

marking an uncrossed "t," or an undotted "i," or a half-formed letter, as a distinct mistake.

ENGLISH GRAMMAR.

Firstly, choose the *shortest* standard text-book you are acquainted with. Next, make the scholars learn the definitions of the parts of speech. Then devote a lesson or two to each part of speech singly, beginning with the Noun and Verb. Make the scholars pick them out in the grammar itself as they come to them, in reading it aloud, and show how each answers and fulfils its definition. The teacher must, of course, carefully explain the definition in every possible way to begin with and as he goes along.

Then those words must be taken which are sometimes one part of speech and sometimes another, such as "*for*," "*that*," "*practise*," "*pervert*," "*want*," &c. The teacher must make up sentence after sentence in which they shall occur in their different uses, till the scholars can readily detect what part of speech they are in each case, and how in each case they come up to the definition of that part of speech. Simple sentences may then be dictated or written on the black-board, containing different parts of speech, and the scholars required to write others on the same model.

A blank form of how to analyse sentences may then be taken and kept prominently before the scholars' eyes while they analyse sentence after sentence. The different technical words used in analysing must be explained most carefully again and again, to the best of the teacher's ability.

The briefest possible blank forms of how to parse each word may then be drawn up by the teacher, carefully copied by the scholars, and kept before them in parsing till they can parse correctly and rapidly without them. The text-book may meanwhile be read over by the scholars in class, and every

sentence of it carefully explained by the teacher till he is sure the scholars understand it.

The rules and the exceptions, the parts to be learnt by heart, must be cut down to the smallest possible number of words, carefully underlined in the book, and committed to memory. If copied out in manuscript they should not exceed two, or at the most four, pages of foolscap. When the exact words are once fixed they must be learnt with the strictest accuracy, and repeated again and again whenever the lesson illustrates them, as also on set occasions.

Text-book and parsing, study and practice, will thus go hand in hand and throw light and interest on each other.

This way of learning grammar exemplifies the great rules of thorough and of sound teaching. Choose carefully what is to be learnt. Understand it thoroughly. Learn it perfectly, and repeat it over and over again.

We subjoin some definitions of the parts of speech which suit the system laid down above. It will be seen that each definition gives the derivation of the word it defines as well as a description of it :

DEFINITIONS.

1. Noun—the *name* of a person, place or *thing*—(goodness being “a good *thing*.”)
2. A Pronoun stands *for a noun*.
3. Adjective—a word *added to a noun* to qualify it.
4. Verb—the *word* averring an action or condition of some person, place or thing.
5. An Adverb is *added to a verb* (or other part of speech) to qualify it.
6. A Conjunction *conjoins*.
7. A Preposition governs the noun it is *put before*.
8. An Interjection, a word *thrown in*.

ENGLISH COMPOSITION.

This is one of the most directly and immediately useful studies in the curriculum. Parents perceive

progress in this sooner than in anything else. It is well for all scholars to bring an English composition of some kind once a week—say every Monday. Occasionally it is well to tell the class to get up some subject by means of books, conversation, &c., and to set them down to write off an essay on it at school in perfect silence. A formal letter addressed to the teacher should be brought at intervals.

Good has resulted from making a backward private pupil write a diary for a few weeks. It strengthened his powers of observation and supplied him with plenty to write about.

Great moral good may occasionally be effected in a school by a careful choice of subjects for composition. Make a frivolous girl write on "What actually yields her the greatest pleasure in life," and she *may* be stimulated to careful self-examination; and self-examination is the portal and doorway to the entrance to "The Higher Life" here below.

At times, in the history of a school, an essay on "What are and what ought to be the staple subjects of our daily conversation," may be of special use. The young talk and write more obscenity often than is dreamt of by their parents or their unsuspecting teacher. An essay on the biting couplet,

"Indecent words admit of no defence,
For want of decency is want of sense,"

may do something to stop this silly habit.

Other subjects which have been found good for compositions are "The wild fruits of Canada,"—"The wild flowers of our neighborhood,"—"The duty of parents in sending their children to school,"—"The pleasures and annoyances of school life,"—"The effect of growing up without education,"—"What distinguishes man from the brute,"—"The duty of children towards their parents,"—"What are the good works the young can do,"—"How to find out

our besetting sin,"—"Spring,"—"Summer,"—"Autumn,"—"Winter,"—"A description of our village,"—"A visit to a workshop."

But the careful teacher will find a pleasure in choosing his own subjects, and he may often choose them so as to check some failing which he finds to be getting fashionable in his school.

GEMS OF ENGLISH VERSE BY HEART.

Let us add one more to the numerous subjects taught now-a-days. Next to the songs they sing nothing would more shape the style and character of our boys than to learn by heart the noblest poems of England's noblest poets—the best and noblest in the world. Not only are they abiding treasures ready for golden use in every lonely walk and hour of sickness and sleeplessness, but, if well ground in and oft repeated, they insensibly influence the words a man says, every sentence he writes, almost every thought he thinks. No man should be robbed of the deep pleasure and deeper profit, for life, nay, for death itself, of knowing indelibly such inspirations as Gray's *Elegy*, Goldsmith's *Village Parson*, Reade's *Good Night*, Shelley's *Ode to a Skylark*, &c. Perhaps they are best "got up" for Public Speech and Recitation Days, which having, like everything else, some few drawbacks, are on the whole of incalculable utility.

GEOGRAPHY.

In teaching Geography give the scholars at the end of one lesson the pronunciation of all the hard words in the next. Again, we repeat that children must never have anything to unlearn. If you cannot get a full supply of maps, never be satisfied till you have a map of the Two Hemispheres at least, hanging up in the school. If School Commissioners will not buy one, get a subscription taken up from house to

house for it. One of the required size costs \$3.75. Make the scholars show with a pointer on this map the approximate position of the places mentioned in the lesson.

Map-drawing is also most important. Make the children draw rough plans or maps of their school room, the school grounds, and the town in which they live. For the last mentioned you may draw them a copy on the black-board yourself. Children take great pleasure and interest in map-drawing, and it trains at once the eye, the hand, and the mind.

It is well sometimes in teaching Geography to take a long imaginary journey. Let the class get up the places they will pass through, the necessities to be provided on starting, and what things will most probably be bought in each country. Trace your travels on the map. Ask the class sometimes where all the things they eat and wear come from.

Some say that to teach boys to recollect what they are told as distinguished from what they read in books, it is best to teach some one subject without a text-book. Geography has been tried with success for this purpose.

It is well for a teacher to inculcate a love for scenery and the beauties of nature by occasional carefully prepared, enthusiastic descriptions of the marvels of geographical discovery. Enthusiasm is catching. Take a vivid interest in your lesson yourself, and your scholar will probably take an interest in it too.

For heights and distances, areas and populations get some standard, as well known as possible to the school, for comparison. For such standards some take the height of the nearest big mountain or church-steeple, the length of the nearest river, the size and population of the town they are in,—or of the Province of Quebec—or of Great Britain. Deduce the *rough* proportion which you assert by measuring with

the eye on the map, (when feasible) as well as by actual division of the figures given in the book. Choose your own standards, choose them carefully, and use them constantly. For small areas, the size of your school-room is a very convenient standard. Learning numbers, in lieu of some such rough proportion as this, is cruel waste of time, and is that one process so mortally injurious to the memory—teaching it to learn, parrot-like, *by heart* what it is sure to forget, and has not even any serious intention of permanently remembering.

HISTORY.

To teach the history of a country we would suggest that a very brief outline of the chief events of the whole history of it be committed to memory by all the class, and rapidly repeated by some one member of it before every lesson.

Lines might be drawn across the black-board, one for each of the centuries under review. These can be divided into decades by five vertical cross-lines and breaks between them. An initial letter to suggest each of the "chief events" above alluded to, must be placed in its proper place on these lines. The relation of the subject matter of each lesson to the "chief event" which preceded and followed it, and its position on the century lines must be briefly pointed out. Scholars must draw these history charts for themselves.

Occasionally a rough map might be drawn on the black-board, and the movements in a campaign be given by moving pins from place to place. Attached to the head of each pin might be a round piece of card-board with the initial of the General it represents on it.

It has been well said that "the best way to teach history is by a succession of well-told tales." Special points of interest should occasionally be got up by

the scholars from more extended histories lent them by the master.

OBJECT LESSONS.

The subject of object lessons is taken up by abler hands than ours in the appendix, so far as the art of giving them can be learnt from a book. Where object lessons have reference to animals, a careful teacher would be sure not to overlook so important an animal as man; and in treating of man, would be sure to dwell on the most important part of the subject—the conditions under which he flourishes most; the laws of health, that is, or hygiene. The points to which attention would have to be called are fortunately few in number—the necessity of cleanliness, plain food, ventilation, exercise, and early hours being the principal. I could wish, indeed, that brief pointed treatises on these subjects were in all the school readers (except the first), so that a copy of them would be in every house in the land.

In talking about the domestic animals, various ways in which they are in the habit of being treated with thoughtlessness or cruelty (whether it be by check-reins, or unwarmed bits in winter, or any other way), may well be alluded to.

PLAIN SEWING.

Plain sewing is one of the most delightful and profitable occupations of a housewife. It is ceasing to be delightful, just because girls do not know how to do it. It is, in its nature, as pleasant as fancy work. It is useful and profitable. Fancy work is wasteful and expensive, if not extravagant. Girls like to do what they can do well. Now-a-days, they are not taught sewing at home. They must be taught it at school. The art of "cutting out" garments of all descriptions especially should be taught. It is soon learnt, easily learnt, and a most valuable acquisition. ² The

great complaint against our schools is that they teach our misses to be above helping their mothers. How much more likely they will be to help to make their brothers' and sisters' clothes, if they know how to do it! They will then be proud to show their superior skill. What we do well, we do with pleasure. What we do with pleasure, we are anxious to do. Mothers will pay more in country parts to have their children taught dress-making than they will to send them to school. How much more will the parents, how much more will the children, value their education, if it leads directly to something useful and practical? The Pharisees all taught their children a trade to fall back on in adversity. We may well imitate them in this, instead of inculcating that Pharisaic spirit of "I am better than others," which is fostered by a useless education.

Our leading authorities on insanity are speaking loudly of the evil effects of over-intellectual training. There is no better medicine for the brain than the work of the fingers. If a lunatic will do manual labor, his cure is almost certain. By introducing sewing into our girls' schools, Commissioners will avoid the risk of being responsible for an evil too insidious to be plainly detected, and too frightful in its effects to contemplate.

But without any strain on the brain, the art of French conversation may be pleasantly acquired at an afternoon's sewing at regular intervals. That the vocabulary required is restricted, is a great advantage. Words can be learnt at other times, but to get over the *mauvaise honte* which prevents the young from speaking a foreign language, the occasions for speaking it should be natural, and the vocabulary required be very small.

Now, that we are speaking of French, we may suggest that school directions be given in French, or some one or more studies,—say, for instance, the History of Canada—be pursued with the advanced

classes, in that language. Boys often seem to be taught the language of a foreign nation very unsuccessfully by a member of that nation. An Englishman, in teaching French to English boys, is at once more quick to see the difficulties which the French language presents to English minds, and is likely also to be more ready and apt in explaining these difficulties; and, finally, finds less difficulty, for the most part, in securing attention and keeping order.

CHAPTER III.

REASONS FOR TRAINING THE EYE AND EAR.

"Choose the best life, and custom will make it the pleasantest."

CICERO.

We have wonderful power over ourselves. We can train ourselves to enjoy *anything*, from living upon a pilaster (like St. S. Stylites,) or drinking absinthe down to chewing tobacco.

Our happiness ought to arise mainly from the play of our affections. But with most of us it depends, alas! in the main, on the use of our five senses.

Now we share these five senses in common with most of the other animals. Even fishes hear, and moles have eyes. Are, then, the pleasures derived from each of these five senses all alike animal and alike sensual? No; some senses yield very little pleasure to brutes, and some yield pleasure to man alone. This seems the law: "In the exact order in which the senses become less rudimentary, and able to appreciate more qualities in what they are exercised upon; in the order in which their bodily organs are more curiously and wonderfully made; in the order, in which they become more subject to scientific investigation and scientific laws—in *that exact order* they become less shared in by the brutes and more

"enjoyable to man." And in this exact order, interestingly enough, they are found to be less appreciated by the uncultured and barbarous among men, and more deserving of cultivation and appreciation by you and me.

The subject is fraught with the deepest interest, both in the way of knowledge, and also that one important thing in our lives,—Self-management.

Let us take the senses in order, beginning with the lowest and most brutish.

TOUCH.

Touch is the most rudimentary. Looking to the nicety of touch in Laura Bridgman, in the blind generally, in jewellers, &c., we should, at first sight, pronounce it capable of much education. But it is *comparatively* capable of very little, as we shall see further on. It recognizes merely heat and cold, hard and soft.

TASTE

yields the greatest pleasure in the life of the ordinary brute and the ordinary man. Brutalized men recognize very few and very coarse tastes in their viands. The very degraded appreciate only the sense of touch as food passes down the gullet, like the Greek who wished he was a giraffe, that he might have six feet of swallow to feel his food with, forgetting that this exposed him also to "six foot o' sore throat." The highest intellectual life, the world over, is led by men who derive a very great amount of pleasure, twice a day at least, from having the sense of taste nicely, yea, even artistically, ministered unto. "What are you crying for?" said the Parisian to his daughter, who had just lost her mother, "Haven't you three meals a day?" And those who talk of "blighted hopes and broken hearts" must find their flow of grief diverted awhile when they ask for the pepper

or complain of the absence of mustard. In a false civilization, like that of Imperial Rome, the pleasures of the palate are made the great end of life—so much so that they, the Romans, used to take emetics and enjoy (?) two meals for one. In a crude civilization, we have the chew of tobacco, the salt herring of the saloon bar, and the spasmodic scathing of the throat with alcoholic fire.

SMELL.

yields but little pleasure to the animals. Cats seem to like the smell of valerian. A battle was once gained by knowing that elephants were driven half-crazy by the smell of camels. Horses, it is said, pine amid the reek of a pigsty. The poor seem often to lack the sense of smell. On the other hand very few men of deep minds seem to care much for the pounce box or the perfuming of their handkerchiefs. The sense of smell seems incapable of education. But the extent to which this sense is developed in some of the lower animals is surprising. A dog, if he has only seen a man once or twice, will recognize him, not by his appearance, but by his smell. When you travel along the high road, a panorama of pretty or striking views is impressed upon your

"Inner eye,
Which is the bliss of solitude."

A dog has only a panorama of smells impressed upon his sensorium. Hence if you buy him and drive him to your house in an airy hamper he can find his way to his old home just as well as if you gave him an extended view of the landscape. He will not allow the smell of the hamper to interfere with his mental record of the smells of the highway. And the huntsman who said the hounds could not follow the scent of the fox "owing to them stinking violets" was probably wrong in science, as he was possibly deficient in æsthetic taste.

The eye and the ear are the senses we must laboriously train ourselves to enjoy. Choose the highest pleasures, and custom will make them the most enjoyable.

CHAPTER IV.

THE IMPORTANCE OF TEACHING SINGING.

"Let me choose the songs of a nation, and let who will make its laws."

PLATO.

Firstly, let us assume that singing interferes with other studies.

Let us see what claims it has for preference. Why should we not have a little less geography and history, and a little singing instead?

The character is more important than the mind. Other studies train the mind, singing trains the character. Music has the most powerful effect on the moral nature of a child.

"Good children" are well-behaved. The better a boy is, the more obedient will he be found. As singing, therefore, improves the character, it might be expected to improve the obedience of the scholars and the discipline of the school. And it is actually found to do so. A careful inspection of every "superior school" in the Province shewed that where singing was practised, the discipline was, *without exception, good.*

Of mental studies, reading comes first. In three common schools out of four a child never *reads* (in the real sense of the word) as he should, viz., with a sympathetic and intelligent enunciation of the sentence as distinct from the individual words, except during the singing lesson. Singing may be made one of the best ways to teach a child how to read.

All the Five Senses give us pleasure. The lowest senses are Touch, Taste, and Smell—being shared by the animals, sensual, and incapable of training or high development.

Music and beauty are the avenues to the highest and most refined enjoyments. The nation that does not by singing and drawing train the eye and the ear to appreciate these, lags behind in the march of civilization, and even, strange to say, in wealth.

The eye and ear can be made to yield infinite pleasure, inasmuch as they can be infinitely refined and cultivated, and many of the greatest pleasures enjoyed through them cost nothing. See the immediate effect of songs in making children happy. This alone should insure their practice, even if they taught nothing, instead of teaching (as they do) more than any other subject.

Happy is he who makes children happy. Singing makes scholars love their school, and thus, indirectly, love the teacher.

Education should be moral, mental and bodily. Singing not only improves the mind and the morals, but strangely enough it affects the body, and that in a vital point.

Lung and throat diseases "slay their (thirteen or fourteen) thousands" in New England and New York. Physicians attribute the freedom of the Germans from these complaints to their national training in singing. Hence, too, the German national broad chest. Hence, in part, their orderliness, discipline and contentment, and it certainly has not injured them intellectually.

And now it can be shewn that singing, instead of interfering with, actually

HELPS OTHER STUDIES.

A boy will learn more reading, writing and arithmetic in two sessions of eighty minutes, with twenty minutes singing between them, than in three hours of solid study straight off. We need not prove this.

It is obvious. "You do not seem to attend to your lesson," said a wise teacher, "Let us have a song." They sang, and after the song they worked well enough. It has been carefully estimated that even lads of seventeen do not yield intelligent attention to their studies for more than eighty minutes, and children of nine for not more than twenty minutes at a stretch. Hence we would suggest a singing lesson at 10 a. m., a recess at 11 a. m., a drawing lesson at 2 p. m., and school out at three o'clock.

A master shrinks from giving his first singing lesson as a diver from his first plunge. "Novice-like, he shivers on the bank," as Juvenal says. Force him to make his dive, and he will find it delightful. Now everywhere it *can* be done. It has been shewn at Boston that ninety children out of a hundred can be taught to sing, and it has been estimated that at least ninety-five out of one hundred profit materially by the singing lessons in the Montreal Schools. Teach the children the words of some song. Everywhere some kindly person can be found to drop in once or twice and teach them some tunes. The scholars can then start the tunes themselves. Only one child in eighty cannot sing!

There is one more reason for teaching singing, which, to the wise man, caps all the rest. It trains men to take part in religious worship, and hence induces them to go to church. The regular church-goers are the support, mainstay and blessing of every town where they live. *Verbum sapienti satis.*

We will conclude with some

RULES TO GROW A VOICE

1. Once or twice a day stand erect and throw the arms slowly back five or six times, in such a way as to expand the chest. At the same time put your lips in a position to whistle, and draw in your breath so as to fill the lungs as full as they will hold. Do this once before breakfast

2. Begin with half-an-hour's practice of singing a day, and increase it very gradually to two or three hours. Try one practice before breakfast.

3. Never sing after a heavy meal or when you are hoarse, or have a cold or sore throat, or are in a very damp atmosphere. Never eat indigestible things. Avoid strong tea or coffee before singing. A glass of cold water is the best thing to clear the throat.

4. Breathe *at all times* as much as possible through the nostrils and as little as possible through the mouth.

5. Practise singing the sounds "Ah" or "La," or the syllables Do, Re, Mi, Fa, &c., instead of the words of a song. Practise scales a good deal. Open the mouth very wide when singing.

6. Do not practise very much on any note which you cannot strike true, and with ease. Avoid most carefully any false or affected or "put on" tones, or ring of the voice, in singing, and urge others to tell you of anything of the kind.

CHAPTER V.

TEACH THE YOUNG TO DRAW.

"Those who can draw have always had the same power of daring all else they like."

HORACE, *ARS POETICA*.

The eye and the ear are the only senses that yield no pleasure to brutes, except by association. English, and "Canadian nightingales" indeed, evidently enjoy the sound of their own voices, but they are like Erasmus who could not enjoy a good concert for more than thirty minutes, but could listen to his own poor voice with delight for hours.

The eye and ear are the only senses spoken of as yielding pleasure in Heaven.

Who that has regularly "gone in" for real music and real mountain scenery but would say,

"One hour of a passion so holy is worth
Whole ages of base gastronomical bliss!"

The enjoyment of melody, harmony, pictures, architecture, scenery, are free even from Satiety, that Demon which, the Greeks believed, haunted all human bliss. From the fount of *their* delicious springs, no bitter flings its bubbling venom over the flowers, nay, the appetite for them grows by what it feeds upon. A musician and art student is like a man climbing a mountain. Fast as by a little self-denial he learns to appreciate a higher grade of art or music, so fast a vista of other and higher grades still, opens out on his delighted eye and ear. The rule is simple. Gaze at the best pictures, hear the best classical music within your reach. You will soon learn to enjoy them.

The higher senses divert us from sensuality. The artistic eye or ear beguiles the mind, like a diverted river, into moving less strongly in the channels of lust and gluttony.

We double human happiness then by training our children to take pleasure in these two higher senses. Our daughters must be gently turned this way when young plants. As the twig is bent the tree is inclined. We need not restrict their enjoyment of delicately flavoured fruit or food. These, too, are God's good gifts. But we should speak somewhat scornfully of the pleasures of the table.

And we can do more than this. We have already advocated that every child in our national schools should be taught to sing. It is good for health and for school discipline, and increases the amount of other studies learnt. But also in Canada,

EVERY BOY SHOULD BE TAUGHT TO DRAW.

By this means the Dominion will be somewhat diverted from the costly national outlay for spirits and

tobacco, and lured to take the inexpensive *unlimited* pleasure offered by the "beauty that's all around our paths." For no one enjoys scenery like the artist; and, moreover, a half hour's drawing (alternately with singing) in the middle of a forenoon of book-study, increases the amount of book-lore permanently acquired. Besides the importance of design as a means of practical education, the knowledge of design is also of great practical value in many of the circumstances of life. The knowledge of drawing is indispensable for complete success in almost all the trades. He who can reproduce his ideas by the aid of the pencil, rises to the front rank in his profession. He traces as well as executes, and naturally takes his place as leader and director. The carpenter who designs well becomes a foreman, and often enough an architect. The mechanic who designs, in many cases, becomes a successful inventor.

To know how to draw is frequently a great help to the farmer; he can thus make the plan of his house, adapt it to its surroundings and to the various uses which it is to serve. Drawing enables him to describe the particular vegetation, of which the name is unknown to him, and the kind of insects which destroy his harvests. He can fashion his tools and implements, and communicate his thoughts to others in a multitude of cases where ordinary language would be powerless. Again, the spread of artistic knowledge is *proved* to enormously increase the value of a nation's manufactures. At the exhibition of 1851, England was last but one and the United States last in the list of nations exhibiting manufactures requiring artistic skill. England took alarm and established art schools throughout the country. At the next Exposition, England was first, and the United States still contentedly last. And these manufactures pay the best in the world.

The mere commercial man, anxious to see his country increase in wealth, can do it best by directing

national attention to Art. Art is too often mistaken for the foe instead of the foster mother of money, while it is art alone that enables us to enjoy that wealth with which her own teeming womb is pregnant.

CHAPTER VI.

CLASSICS.

*"Thumb well by night, thumb well by day
The classics."*

HORACE.

Are we to give up classics? This is just now an all-important question in Canada. For if the happiness of a country depends on its education, its education surely depends upon what it learns.

One thing is certain; if a boy can be so trained that, when thirteen or fourteen years old, he will be a fair accountant, a good penman and reader, and able to write a good letter, a wise parent will secure this before all else. Now boys are so trained in the Montreal Protestant Public Schools. If classics prevent this, classics must "fall by the board," and classics do prevent this as taught in our so-called classical schools.

In favor of classics we have the voice of antiquity. But are we not wiser than the aged? Is not the voice of antiquity wrong? To obtain a final answer to this question England appointed a Royal Commission of men of the most untrammelled and liberal minds. They were not loth, we may well believe, to immortalize their names by inaugurating an entirely new system of education. They reported unanimously in favour of classics. This is surely conclusive.

Oxford is *par excellence* the classical university of England; Cambridge, the mathematical. Is it a mere coincidence that Oxford has certainly led the world in religious thought, the deepest subject on

which the human mind is exercised? Is it a mere coincidence that Oxford turned out Wesley, Newman, Pusey, &c? Is it a mere coincidence that the most delightful companion wherever we go the world over, is more or less of a classical scholar?

There are many schools divided into classical and commercial divisions. In all we have inquired into, the boys on the classic side surpass their commercial school-fellows in their own subjects! To such an extent do classics enable the mind to grasp other subjects with exact precision. At Oxford those who give two years to classics, and six months to modern history, often obtain higher honours in the history schools than those who have devoted the whole two years and a half to modern history alone.

Let us now see why the study of classics is so potent a brain-stretcher to train the human mind. It necessitates the most intense concentration on the part of the student. A boy can glance over his geography lesson and chat meanwhile to a school mate. But even to learn *Musa*, he must think of *Musa* and nothing else.

In classics a master can in a few minutes pick out any single boy in a large class who has not learnt his lesson, and hear in a few minutes what has taken hours to learn.

In classics, small differences are all important. All often turns on the one vowel that marks a difference of case or tense. They thus train the mind to that nicety of observation without which all observation is nearly always useless, and often misleading and absolutely harmful.

Again, brutes reason. Articulate speech is the one prerogative of man. Thought itself is unconsciously conducted in unspoken words. What then can be said of a man who does not understand his own language? English in forty more years (at its present rate of increase) will be the language of the world. Now the only way to understand—or “stand under”

—the English language is on the foothold of Latin and Greek. The ordinary words in Latin are used to make up the extraordinary words of English, and the shortest way to make a man sure to understand the scientific portion of the English language is by a short course of Smith's Latin and Greek Principia.

A lady once told us that she learnt more of what language really is by an accidental glance at a list of Latin and Greek roots and their English derivatives than in all her previous training in a good school.

Grammar, again, is one of the sciences of language. Accurate thought depends on accurate grammar. It is therefore important to study the most accurate grammars of the world—those of the languages of Greece and Rome.

The foundations of modern knowledge were laid in the masterpieces of Greek and Roman authorship. Those who aim at improving the superstructure must surely have some acquaintance with the foundation.

As "delivery" is all-important in oratory, so "style" is all-important in writing. Surely then it is indispensable to read the best models of style which the literature of the world has produced, and it is well known that all but a few of the foremost orators in England have been foremost in attributing their success to a study of the Greek and Latin classics. And even Mr. Lowe, who deplores his classical training, is a living instance of its efficiency. Lastly, every Protestant at least will wish his son to read the New Testament in the original tongue in which it was written, and drink the waters of Salvation in the language in which they first flowed.

Some say that it is about as cruel to put a Virgil or Horace into an English boy's hands to teach him Latin, as to put a Tennyson or a Robert B. Browning into a French boy's hands to teach him English. They suggest that a book of easy conversational Latin, like the Colloquies of Erasmus, should be used as a text-book, and the boy's mind not confused with

a multiplicity of text-books. We found the *De Officiis* of Cicero very easy and entertaining, and the *De Amicitia* and the *De Senectute*, which are usually read in schools, very hard.

The conclusion of our argument is as follows: Firstly—A boy should not begin classics to *any great extent* till he is eleven or twelve years old, when his intellect will be so far matured as to make pleasant (because rapid) progress. Secondly—Vigorous measures must be taken to ease the drudgery of the study, the inflections, the genders, the prosody. Thirdly—Latin Verse Composition may be deferred till the age of thirty, if by that time a man finds nothing better in the world to do.

CHAPTER VII.

HOW TO STRENGTHEN THE MEMORY AND MAKE IT EXACT.

TEACHER—"Have you a good memory?"

LATE-TO-LEARN.—"*That depends. If I am owed anything, I have a capital memory. But if I am in debt.....I am rather forgetful.*"

THE CLOUDS.

This time-honoured joke of Aristophanes gives us a clue to the best way to strengthen the memory. It suggests that we remember best what we take the most interest in. To remember a thing, then, we must rouse ourselves to take a lively interest in it. To make his pupils remember a thing, the teacher must induce them to take a lively interest in it. This will necessitate three things:—

Firstly—They must understand it, or they will not care for it.

Secondly—The lesson must not be so long that the interest will flag in learning it.

Thirdly—The teacher must try and make the scholars feel that it is important to them to learn the task set, either to win the teacher's praise, or because it bears on their interests in life.

Roger Ascham enumerates three requisites for a good memory. He says that the memory must be trained to be, 1. Quick in receiving. 2. Sure in keeping. 3. Ready in delivering forth again.

Now, 1. The memory will be quick to receive, if it yield vigorous attention to the thing to be remembered. 2. It will be sure in holding, if it does not try and grasp too much and if it also frequently goes over its store. 3. It will be quick in delivering, if it is practised in giving prompt answers to quick questioning.

VIGOROUS ATTENTION.

One rule that helps us here is eighteen centuries old. It is, that the mind is impressed more keenly by what flashes through the eye than by what passes through the ears. Reduce what has to be learnt to a tabulated form and draw it on the blackboard. In many minds the exact position of a word or mark will help the memory. A most successful lecturer on anatomy in England used to draw bold sketches in coloured chalks on the blackboard, of the chief plates to be got up, and the same sketches always on the *same part* of the blackboard.

The attention is kept vigorous by a constant use of pen and note-book. Very brief abstracts should be made of what is chosen for remembrance, and the greatest care should be taken not to choose too much. Between twenty and a hundred words are enough for an ordinary chapter on history. Instead of proper names the initials only should be written. This tries and tests (and therefore strengthens) the memory in going over the note-book.

Some recollect best by using symbols. Crossed

swords, for instance, will represent a battle. Different nations may have differently shaped swords. The initials of the generals engaged may be written at the hilts. The initials of the place where the battle was fought should crown the whole. An olive branch will symbolise a treaty of peace. The death of a man is suggested by the initial of his name with a line drawn through it.

The discovery of an appropriate symbol for an event is excessively interesting, and will cause some subjects to be studied with eagerness which would otherwise be crammed with disgust. And intellectual is like bodily food. If we do not enjoy our meal, we do not digest it so well.

If a piece has to be learnt by heart, some minds will remember it best by writing it out.

Others again learn a thing more quickly and surely by repeating it aloud. A boy was once set the singular of *Mensa* to learn by heart. He tried to do it and failed. The plural was then added to the lesson. He looked the picture of despair. He was then made to read them out loud, and learnt both in seven minutes. We once learned some German poetry very easily by reading it over once or twice just before going to bed. We then lay down in perfect quiet and forced the memory to recall it word for word.

The above hints are suggested merely as aids to rouse the attention.

When the mind is fagged with study it is no use to try and force its attention. The student must then take a rest, a breath of fresh air, a song, anything to change the current of his thoughts; and begin again. Hence we must never *puzzle* over anything. Directly you get confused, put the matter aside and do not take it up again till after some interval. If a well known name has slipped the memory for the nonce, do not worry about recalling it. Wait a while and it will probably come of itself.

SURE RETENTION.

Our memory is like a pack-horse which should accompany us through life carrying what we want in such a shape that we can get it at a moment's notice. But this pack-horse when suddenly overweighted has a peculiar habit of slipping off its whole load. If by an unnatural force of attention we prevent its doing this and it once breaks down under its burden, then we may have no chance of getting another such pack-horse all our lives.

It is true that we must strengthen our memory by making it constantly carry all that it can bear with ease. But we must put on small loads at a time, neatly arranged, and at first keep continually looking to see if they are being retained in good condition.

The greatest injury to the memory is caused by cramming up a lot of facts for a lesson, to be disgorged when the lesson is being said, and then forgotten. The very few leading points in a lesson must be carefully picked out by the teacher, the rest of the lesson grouped round these in the way of illustration or accessory, but these few leading points must be constantly repeated in frequent reviews of back lessons, and on paper at regular intervals.

Marking the really important sentences in a book is a great aid to the memory. The art of judiciously marking his book should be learnt by every scholar.

In learning history a *very* brief synopsis with dates of the whole period under review should be carefully composed by the teacher, committed to memory by all, and rapidly repeated by some one scholar before each lesson. When a clear outline of the whole is distinctly impressed on the memory, it is much more easy to put any individual fact in its proper position, where it will be readily remembered without special effort.

All this represents what is after all the great prin-

ciple of the art of memorising—the observance of order. Get a brief outline of the subject vividly before you. Jot down the chief points of it on paper, one under the other, leaving spaces between each. Fill in the minor details in imagination or write down some little word in small characters to suggest the most important. Try and discover some law of *development* or *reaction* (the two great laws of history) between the different parts of the scheme thus written out. The mind will then retain surely, what you have thus carefully committed to its keeping, for you must load the memory with the very brief outline alluded to, and that alone. The impressions made by this you must strengthen by frequently going over it. All else will recall itself when needed, by the mere force of association. You must make no effort to load the memory with it.

The best way of learning English verse, which is a common and good study to strengthen the memory, and accustom it to carry reasonable loads, is shewn by the principles laid down in the earlier part of the chapter. The master must first see that the child understands every line and every word of the lesson. The scholar must then try to picture to the mind's eye the event or scene described. The piece to be "learned by heart" must be *very* short compared to the learner's powers, but should be so learnt as to be repeated with rigid verbal accuracy, without the least hesitation, and in spite of such distractions as each member of the class saying a line in turn, &c. Very few pieces must be given to be learnt in a year (hence the necessity of selecting the very choicest gems of the best poets), but these pieces must be repeated over and over again till they are indelibly engrained into the memory for life. A teacher who, while teaching one class, has to keep another occupied, can make the latter write out the poems they know, or the first half of each line, or the first word of each line, without a book.

CRAM.

But, after all, nearly every subject requires a certain amount of "cram." Cram has been defined as intellectual food, swallowed without previous appetite or subsequent digestion. Such are strings of names, lists of rules or exceptions to rules, inflections, paradigms, &c. If these pills are to be bolted, it is surely well to make them up in as small a compass as possible. This is Fuller's advice, "Marshal thy notions," he says, "into a handsome method. One will carry twice as much when trussed, than when it flaps untowardly about his shoulders." So Napoleon said that "he had all his knowledge put away in drawers, and he had only to open a particular drawer to get all he wanted."

In learning a string of names, try and make some word out of the initials. Thus ANZIMEBI gives the initials of the names of the tribes of Israel on the West side of Jordan, in order from North to South. The consonants in the word ManGeR give the three tribes on the East of Jordan. A name is generally suggested almost instantaneously by its initial. By the word Anzimebi the names of the tribes and their position are recollected in *one-fiftieth* part of the time otherwise required.

A string of words is often learnt much quicker, in a sing-song way than any other. Thus the Latin pronouns:

"Ego, mei, mihi, me.
Tu, tui, tibi, te.
Wanting, sui, sibi, se."

are learnt all at once, in sing-song, quicker than any single one of them would be impressed on the memory in the ordinary method. So it is with the Greek pronouns, singular and plural.

Here the rhyme helps us, and rhyme, like rhythm, is an important adjunct to the art of memory. How quickly the signs of the zodiac are learnt in rhyme:

"The ram, the bull, the heavenly twins,
And next the crab the lion shines,
The virgin and the scales;
The scorpion, archer and sea goat,
The man that holds the watering pot
And fishes with glittering tails."

Here the very faults in the rhyme help to make us remember it.

The rules when to put a capital letter in English can be reduced from two pages to six lines.

"After note of exclamation !

And of interrogation ?

Full stop . Proper names, words O and I,

Book, chapter, writing, line of poetry,

Words very reverential and very emphatical,

These nine begin with letter capital."

The teacher can easily warn the scholar not to be misled by the last line but one.

The rules for the quantities of letters final in Latin, which used to cover a couple of pages in the grammars of our unlucky boyhood, may be reduced to a score of short words, viz.:

"Long are :—all vowels final except e, and c, as, es, os.

"Short are—e final, and all consonants final except c, as, es, os."

The exceptions are not numerous.

So the neuter terminations of the third declension in Latin are learnt at one effort of the mind by working them into the words "calet armenurus," "Armenurus is hot." How much more quickly this is learnt than such a list of terminations as al, ar, e, c, ur, us, t, men. The masculine terminations of the third declension make the words "osor Neronis," i. e. os, or, N, er, and o, making *onis* in the genitive.

Many Latin grammars devote a page or two to those verbal notions which, when expressed by Latin verbs, govern a dative. Expressed in rhyme they fall (exceptions and all) into six lines—

"To envy, spare, persuade, displease,
 Heal, favor, pardon, study, please,
 Command, obey, resist, or serve,
 To threat, tell, trust, be angry with,
 All take a dative case, observe,
 But *lædo*, *juvo*, *jubeo*, *th'* accusative."

So with the rules for verbs governing the genitive and ablative, and all the otherwise dreary exceptions to the rules of Latin grammar.

These are all crams. But they belong to the things which must be crammed, and we maintain that the fewer these are the better, and that the shorter they are the better.

Things can be expressed in a shorter form in verse than in any other way. That is why Pope wrote his *Moral Essays* in verse. So he claims. Truly, English poetry admits of a wonderful display of terseness. Take this excellent example—

"Whence but from Heaven, could men unskilled in arts,
 In different ages born, in different parts,
 So wondrously agree? Or how, or why,
 Conspire together to contrive a lie?
 Thankless their pains; unpleasing their advice;
 Nothing their gains; and martyrdom their price."

We subjoin the complete table of the Latin genders, as an example of the rules we have laid down.

LATIN GENDERS.

DOMINANT RULES.

MASC. are males, months, mountains, peoples, rivers, and winds.

NEUT. are all indeclinable nouns.

FEM. are females, countries, cities; Isles, most plants and trees.

GENDER BY TERMINATION.

DEC. I, II, IV, V.—*Masc.* *us* and *er*. *Fem.* *a* and *es*. *Neut.* *u* and *um*.

EXCEPT. *Masc.* *Adria* and *dies*; (but *dies* is *Fem.* also, in sing. when it means time).

Fem. ii. Colus, domus, nardus,
Alvus, humus, vannus.

iv. Colus, domus, idus,
Acus, manus, tribus.

Neut. virus, vulgus, pelagus.

Dec. iii. Masc. Osor Neronis [i. e. os, or, n (except men) er and o making onis in the Genitive.]

Fem. Is, es, As, Aus, and o making inis and tio, us—utis, nouns in 2 cons. and x.

Neut. C, al, e, t, Ar, men, ur, us (Armenurus is hot.)

Except. Masc. as and its compounds; sal and sol; ordo, carbo, turbo, margo; grex, cortex, calix, vortex; pes, paries, vepres.

Nouns in is. Amnis, axis, cinis, collis, crinis,
Fustis, Fascis, Funis, Follis, Finis,
Unguis, anguis, ignis, orbis, ensis,
Sentis, sanguis, vermis, vectis, mensis,
Panis, Postis, Piscis, Pons,
Lapis, torris, hostis, dens, fons, mons.

Fem. eos and dos, caro carnis, incus, palus, pecus, tellus; arbor; opinio, legio, regio.

Neut. vas, vasis, os and æs,

Iter verber ver et, uber et cadaver
Acer siler piper, tuber et papaver.

CHAPTER VIII.

A DEVICE TO RECOLLECT NUMBERS AND DATES EXACTLY.

GREY'S MEMORIA TECHNICA.

a	e	i	o	u	au	oi	ei	ou	y.
1	2	3	4	5	6	7	8	9	0.
b	d	t	f	l	s	p	ck	n	g,r.

"Deary me," exclaimed an old woman from the country, "I've forgotten that lawyer's name. But he lives in Yorke street; number 857.....or 587, or.....875."

"It was number 758, aunty, I think," said her niece, "or 578 for sure."

It was neither.

One person in about ten has a vivid recollection of numbers which never gets confused. The remaining nine-tenths of the world will find Grey's famous *Memoria Technica*, which can be learnt in ten minutes by word of mouth, almost invaluable to them through life.

We despair of explaining it on paper. We will however try to do so.

It consists in letting each of the ten digits be represented both by a vowel and a consonant,—and when you have a long number to remember to combine the representative letters into some funny or striking word.

Firstly, as to the vowels. Of course a, e, i, o, u, represent 1, 2, 3, 4, 5, respectively, as in the game of Magic Writing.

Now *a* which means 1, and *u* which is 5, added together make the diphthong *au*, which is 6; similarly *o* and *i* combine, and the diphthong *oi* means 7; and *ou* similarly means 9. Eight is represented by its first two letters *ei*. Y is neither vowel nor consonant, (neither “fish, flesh, fowl, nor good salt herring,”) and very properly stands for 0.

In consonants, B, the first in the alphabet, means 1.

D, the first letter of *deux*, is 2.

T, of course, is 3; and F is 4; and S is 6; and N is 9.

Big L stands, in Roman numerals, for 50, and so little *l* well represents 5.

P the *p* in *septem* means seven, and C the *c* in *octo* is eight.

G and R stand for nought.

“Z stands for zero,
Which is nothing at all.”

Now, supposing the old lady from the country wished to remember the number of the lawyer's house. It was 785. The equivalents of 7 are *p* and *oi*; of 8 are *c* and *ei*; of 5 are *l* and *u*. So 785 could be “worked into” *peil* and *oiku*. As she would expect to lose a

pile of money by going to a lawyer (if she knew anything of law) she would remember the number of the house by the word "peil" very easily.

Take another example. Cartier planted civilized life on Canadian soil in 1534. Write down 1534 with its representative vowels and consonants under it, thus:

1	5	3	4
a	u	i	o
b	l	t	f

From these we can make the words *alif*, *alio*, *buil*, &c. Of these we choose *alif*, and say to ourselves, "Cartier planted a *lif*. We may soon forget the date, 1530, but we shall not so easily forget the word *alif*."

The whole outline of the history of Canada is given with the

EXACT DATES REDUCED TO WORDS

in these three hexameter lines.

Cartialif, Champsyk, Assep, Kirksen, Peasid Maisod.

Lavalsun, Dollsassy, Phipsour, apar Walker, Acadpuls.

Wolphun, Montgomerapps, Chateat, Papinip, Dominiksoi.

Which is thus to be interpreted:—Cartier brought European life to Canada in 1535. In 1608 Champlain founded Quebec and his men got sick. The company of 100 associates was founded in 1627. Quebec fell before Kirke in 1629. But the English ownership of Canada was *set aside* by the peace of 1632 and Maisonneuve turned the first *sod* of Montreal in 1642. The founding of Laval University in 1659 shewed that the *sun* of France was not set here, but lasted through the heroism of the model of the hero of Cooper's famous "Last of the Mohicans," in 1660, and the *sour* time Admiral Phipps had at Quebec in 1690, as also the

appearance of Walker in 1710. In 1755 England was forced to *pul* the Acadians from their homes. a necessity taken full advantage of in Longfellow's Evangeline. Then Wolfe had the *phun* of taking Quebec in 1759, followed by the *raps* Montgomery got in 1776. In 1813 America thought that England's adversity was her opportunity, which is typified by the defeat, by a handful of English troops, of overpowering numbers of the enemy. In 1837 came Papineau's rebellion with its many grave consequences. Lastly, in 1867 Canada became a Dominion. For as the destruction of Canada, be it called Independence or Annexation, will not come, we hope, before the Greek Calends, and the time for pigeon-milking and ass-shearing, we here end our chronicle.

By this device may be recollected the pages which men's accounts are on in a ledger, &c. Thus, if a man's account is on page 166 remember him by the word *ass*. If on page 172 think of the word *ape*. It has obviously countless similar uses.

Enough has been said to show that no teacher should let his pupil leave school or college without taking ten minutes to teach him the Grey system of *memoria technica*.

CHAPTER IX.

THE NATURE OF CHILDREN. ITS COMPONENT PARTS ENUMERATED. HOW BEST TO IMPROVE AND DEVELOPE EACH PART.

"If our soul be a garden full of flowers and weeds, it were well we began betimes to cultivate the one and pull up the other."

BACON.

If the business of teachers is to cultivate the young, it is well that they should know the nature of the soil they have to till. The human mind is a garden full

of plants which, according to the way they are cultivated, will become noxious weeds, producing their kind, or healing plants scattering blessings around them. It is a complicated machine full of forces which teachers may turn to their profit, or which will surely work them harm.

Now the teacher can sow no new moral plants in the human mind. She can only check, trim, or develop those that are there, in *germ* at least, already, and according as they are properly or improperly cultivated, they will work for good or ill. These motives to action may be said to be of three kinds—appetites, desires and affections. They may be looked upon as three sets of main springs to a watch, and Plato would say that the appetites are made of iron, the desires of silver, and the affections of gold. The appetites require to be somewhat checked, the desires to be guided, and the affections to be encouraged and developed.

Every attempt to enumerate all these may be accused of being imperfect. But for the teacher's purposes we will assume that there are six appetites, five desires, and four affections. "Duty" is the sum and expression of the *due* gratification of them all.

The appetites concern the body. They are the strongest motives, as if made of iron, and are the most active in the undeveloped child and the undeveloped nation. Any asceticism, or attempt to crush them out, is unnatural, and found to result in a violent and ruinous reaction. They may be said to be six in number; the appetites for food, for dress, for shelter, for exercise and rest, (alternately) and for sex.

FOOD.

We were meant to enjoy our food. If we do not enjoy it, we do not digest it perfectly. Indigestion injures mind and morals. But a man is best diverted from his natural gourmandism by having his

attention turned to higher objects. Man was possibly made to eat that he might have a pleasant chat with his wife three times a day. At the same time a good national education should result in producing good national cookery.

DRESS.

The appetite for dress is instinctive, and can be developed from the daub of woad, which satisfied the naked dandies of aboriginal Britain, to the 3,000 dresses left behind her by Queen Elizabeth. A teacher should, by example, teach her scholars to be neat and bright in their attire, but not gaudy; to avoid the vagaries of fashion; to shrink from all shams and imitations; to wear nothing that is not real, and, above all things, to be modest.

SHELTER.

This instinct is satisfied with the cave of the Troglodytes and discontented in the marble palace of a Stewart or an Astor. The teacher should utilise it by attracting children to school with a bright school room, exquisitely neat, adorned with picture-tablets and maps, and, if possible, with plants and ever-fresh bouquets, or a stained glass window or two.

EXERCISE AND REST ALTERNATELY.

Children should stand nearly as long as they sit in school. They should, if possible, be changed from seat to seat and room to room, in the course of the day. The desire to exercise the muscles of the throat should be gratified by a morning and afternoon song or hymn.

Next we come to the five desires. There are one or two more than five. But we will content ourselves with discussing five: the desire to acquire, to imitate, to retaliate, the desire of being noticed, and the desire of knowledge.

ACQUISITIVENESS.

This can be gratified by assigning marks as a reward, even though the marks lead to nothing, and once given are taken no further account of. Tickets and prizes take further advantage of this tendency to get and keep.

IMITATIVENESS.

Example is better than precept. Your scholars will be looking-glasses in which you will see your own virtues and faults magnified. Like master like man; like mistress like maid; like teacher like taught. Be industrious, punctual, low-voiced and "silencieuse." Your scholars, though you may not know it, are becoming so too.

GRATITUDE AND REVENGE.

Show your scholars the greatness of gratitude and the pettiness of revenge. Anger is the instinct to revenge, and hate is nothing but settled and deliberate anger. Show that "anger is a short madness," which makes the angry person unhappy, and tends to shorten life. Hence it is devilish to tease or make others angry without cause.

AMBITION.

The desire of being noticed is most potent for good or ill. It developes into emulation or envy, loyalty or mutiny, a love of praise or even an *itching to be punished*. As a rule, an ounce of praise goes as far as a pound of blame. And the best way to punish some evil-doers is by snubbing them. Teach your scholars to despise the admiration of poor judges, but to seek the approval of the good, the approval of their own consciences, the approval of their God. Taking places in class, marks, reward-cards, prizes, are means of evoking this potent spirit of emulation, which, if the

teacher be impartial and equally affectionate to all who do their best, will never degenerate into envy.

CURIOSITY.

This desire of knowledge it is the teacher's main province to gratify. It grows by what it feeds upon. We have no word like the Greek *Philomatheia* for "the desire to know what we ought to know." The Greeks had no word like our word *Inquisitiveness*, for "the desire to know what we ought not to know." Children desire to know all about the things they see and the actions of the people they see. Hence the use of object lessons. But they may be taught to love study as a means of obtaining a deeper knowledge of men and things. They love to be taught to sing, to draw, to sew, to work. But the first part of the day should be taken for books, less pleasing at first but more enchanting eventually. The teacher's main object is to stimulate the love of knowledge in a right direction.

The affections can hardly be over developed. The main rule is that we must take care of our actions, and our hearts will take care of themselves. We learn to forgive by acting as if we forgave. We learn to love by acting as if we loved. The old rule was, "Be what you wish to seem." A more useful rule is "to seem what you wish to be." The highest of all affections is the love of God. We attain to that by doing acts of love to men.

He prayeth best who loveth best
All things both great and small,
For the great God who loveth us
He made and loveth all.

To manage our motives aright, that is, to check our appetites, to control our desires, to develop our affections—this is Duty. But at every moment of our lives we have an idea of duty. It varies according to our previous training. We must both educate our con-

science and obey our conscience. "No honest man," says Butler, "will be long in doubt as to what is his duty in any particular instance." In most cases conscience gives an instantaneous verdict. The teacher must train the scholar to do his duty in any particular instance regardless of consequence, advising him of the necessity of self-examination to see if his idea of duty is not warped by self-interest or blinded by self-love. If we act from duty it will turn out in the end to be both pleasant and expedient. But if we make pleasure and expedience our motive, we shall end in not doing our duty. Choose the best life, and custom will make it the most pleasant. It will perhaps be useful to the teacher to have as complete a map of human nature as our humble powers can present to her. She can then train any young charge as Horace was trained by his excellent father. To develop a virtue she can point to the illustrious example of some great man exemplifying it. To check a vice she can point to the animal in which it seems to be a master passion. Most of our actions are affected greatly by force of habit. Any given action may come from some one or more of many entirely different motives. A man may put money into the plate in church, for instance, firstly, because his parents trained him into the habit, or, secondly, from the "Desire of Notice," or, thirdly, from "Love to man," or, fourthly, from "Love to God," or, lastly, from a mixture of all these four. And yet it is useful to know the motives whence this action may spring to help to know the motive power in any given instance.

A good many points in our "Synopsis of Human Nature" require enlarging upon. We will select a few of them. Firstly, it may be observed by looking at the column of vices that they come mostly from *over* development of the appetites, from *under* development of the affections, and *undue* development of the desires. The "Desire of Being Noticed" develops into various forms, praiseworthy or blameworthy; into ambition,

emulation, envy, jealousy, vanity, pride besides other and more subtle outcomings. It is convenient to refer them to one simple germ, or instinctive desire.

All our "Motives to Action" were given us for some wise purpose. Take for instance "Imitativeness." Through this, very young children pick up nine-tenths or more of all their practical acquirements. It sometimes seems to die out, or to be killed by some mastering passion, in which case a man becomes eccentric. In other cases men yield to it till they follow their neighbours, right or wrong, like sheep. "Fashion" in clothes is an amusingly foolish development of "imitativeness." Its votaries are also much influenced by a faulty outcoming of the "Desire of Notice." We despair indeed of seeing our wish accomplished that Fashion with its vices and its victims may cease to be, and every rational man and woman dress exactly as is becoming to themselves and the climate they live in.

It will be seen that no animal but man shares either the highest motive "Love to God," or the lowest, "Love of Clothes." A "Desire to Cook" might be added to the appetites, for man is not only distinctively the clothes-wearing animal, but the cooking animal. With regard to the *Formica Sanguinea*, see Kirby & Spence's Entomology. They are so lazy that they make the Negro Ants carry them round for exercise.

The fourth column reminds us of the classical fancy that when God made man he made his character a compound of all the qualities possessed by all the animals, and is strangely suggestive of the idea that many animals were made to show man the ridiculousness of those "master passions" which result from giving any one "Motive to Action" full sway. The law of "master passions" is hardly, however, such a complete key to the study of human nature as Pope thought it to be in his day, when men and women seem to have run to greater excesses in everything.

The names in the fifth column are mostly those of

men who ought to be constantly alluded to by the teacher, as dark warnings or shining exemplars, to point a moral or adorn tales.

Ummidius is an example of the curious love of coined money, which is at first, we believe, desired as a means, (or from Imitativeness of others) and then rested in as an end. O. W. Holmes says that the Romans worshipped their eagles, while the Americans worship the dollar which is but the tenth part of an eagle, but "to atone for this," he adds, "they worship it ten times as much." But banks and bank bills have nearly put an end to the absurd love of *coins*, so prevalent, apparently in the days of the poet Horace. He speaks of one rich man who nearly starved himself to death from penuriousness. His doctor rouses him from his coma by having his bags of gold counted in the room. The dying man opens his eyes. "Doing this," he says, "while I'm alive." "Eat this," says the doctor, putting rice broth to his mouth, "to stop them." "How much did it cost?" gasps the invalid. "Nine pence." "The expense will kill me," the miser moans,—and dies. Horace speaks of another who lay in rags by his money-piles, cudgel in hand, trembling at every sound, and at last is found dead from starvation on top of them.

The man named Tarrare in our table hired himself to eat food in quantities for a show till nobody would be at the expense of satisfying his cravings. He could hold twelve eggs in his cheek-pouch, and when unfed, could wrap the skin of his belly round his body. Janet McLeod, a native of Wales, laid so motionless that it is said that one pint of water was all the nourishment she required in four years. Here there was doubtless a little imposture, and a working of the "Desire of Notice" which seems so busily omnipresent. This latter motive was doubtless strong in the "Quietists" who lay for years motionless, in hopes of attaining thereby to peculiar spiritual gifts, and in the monks of Athos, who, according to Carlyle, gazed

immovably at their stomachs for years, in anticipation of a resulting "vision of the indescribable and glimpse of the beatific."

It may be observed that we have put the British down as the nationality exemplifying the motives of "Love to God" and "Love to Man." We are far from saying that the "good time coming" has arrived, and that we exemplify these motives as master passions. It is merely asserted that these motives may be plainly seen to be actually at work in some of us. And, indeed, at the present day, who are giving more money towards hospitals, towards the building of churches, and towards missionary effort, than the English speaking races? We would honestly own, however, to much partiality in putting down "The British," as exemplifying the highest motives on our list, so instinctively and promptly as we did, in making out the table. The missionaries of the other Western Races of Europe have been actuated by, at least, as much pure love to God as the English have in their zealous and self-forgetful efforts. But that we frankly own our partiality may help to teach one great truth. One of the main lessons to learn in studying human nature is the almost universal existence of this partiality towards ourselves and all that belongs to us. No man in a nice or complicated case is a fair judge of right and wrong where his own interests are concerned. One of the profoundest judges of human nature has observed that "the wish is father to the thought." What we wish to be true we have a great tendency to think to be true. Our desires influence our judgment and even our memory. If two men start on a trip together, paying all the small contingent expenses alternately without keeping account, each is sure to think at the end of the journey that he, on the whole, has paid the most. It is amusing in a court of law to see how the statements of different honest and truthful witnesses tally, in their divergence, with the amount of friendship each bears to-

wards plaintiff or defendant. It is most important that everyone should start in life with a full knowledge that this warping of the judgment and memory in favour of self exists both in himself and others. It will prevent his passing too harsh judgments on his fellow creatures. It will make him feel that his own judgment is not infallible, and suspect that where he is disposed to be quite sure that his estimate of what is due to him is correct, it may nevertheless be faulty and unfair. One of the most unfortunate things in life is to have a low estimate of one's fellow-creatures. Misanthropy is almost synonymous with unhappiness. The misanthrope, or man who hates his fellow man, is proverbially melancholy. If men see that you suspect them they will in turn suspect you. It is almost more profitable in the end, to be sometimes deceived than to be always suspicious. A man may as well start in life without expecting to get his full rights;

" This is a very good world we live in,
To lend in, spend in, or to give in ;
But to beg, or borrow, or get a man's own,
It's the very worst world that ever was known."

A man often loses more by doing battle with animosity to get what he conceives to be his full rights, than by going without some fraction of them.

So much may be learnt, perhaps, from imperfections in the Synopsis of Human Nature, which will be found in the next two pages.

But the main lesson to be learnt from our Table of Motives is to know which to control;—the appetites; which to develope equably and with care;—the desires; while we indulge our affections to their fullest extent till we rise through the love of man, to the highest and most mysterious affection of which a human being is capable, "The Love of God,"—and in all this let us act on the Golden Rule, "We learn to love, by doing the acts of love."

SYNOPSIS OF

	MOTIVES TO ACTION,	VIRTUES,	VICES.
	SENSE OF DUTY		
AFFECTIONS.	{ Love to God.....	Piety.....	Ungodliness
	{ Love to Man.....	Philanthropy.....	Misanthropy,.....
	{ Love to Animals and things	Patriotism, &c.....	Heartlessness.....
	{ Love to Offspring.....	Self-forgetfulness.....	Heartlessness.....
DESIRES.	{ Of Life	Courage.....	Fear.....
	{ Of Knowledge	Philomatheia.....	Inquisitiveness...
	{ Of being noticed.....	Various.....	Various
	{ To Imitate	Docility	Eccentricity.....
	{ To do as one is done by.	Gratitude.....	Revenge
	{ To Hoard.....	Economy.....	Miserliness.....
	{ To Fight.....	Courage.....	Quarrelsomeness.
	{ Of Money.....	Liberality	Avarice.....
APETITES.	{ Hunger	Temperance.....	Gluttony
	{ Thirst.....	Temperance	Drunkenness.....
	{ Love.....	Gallantry.....	Lust.....
	{ Exercise and Repose alternately.....	Muscular Christianity...	Fidgetiness.....
	{ Tranquility.....	Tranquility.....	Sloth
	{ Shelter.....	Love of Home.....	Extravagance
	{ Clothes.....	Neatness	Extravagance.....
	FORCE OF HABIT		

HUMAN NATURE.

ANIMALS EXEMPLIFYING EACH MOTIVE.	MEN EXEMPLIFYING EACH MOTIVE AS A MASTER PASSION.	NATIONS EXEM- PLIFYING EACH MOTIVE.
None.....	St. Paul.....	The British.
Dog.....	Howard.....	The British.
Cat.....	Wordsworth.....	Swiss.
Stork.....	Rispah.....	Jews.
Hare.....	King John.....	E. Indians.
Magpie.....	Aristotle.....	Germans.
Horse.....	Napoleon.....	French.
Ape, Parrot, Mockingbird.	Pausanias.....	Some African Tribes.
Camel.....	Hamilcar.....	Spanish.
Squirrel, Ant.....	S. Elwes.....	
Soldier Crab.....	Charles XII.....	Irish.
None.....	Marlborough.....	Jews.
Glutton.....	Tarrarre. See Popular Physiology, p. 113.....	Fijians,
Man.....	Charles Lamb.....	Swedes.
Monkey.....	Byron.....	
Swallow, Negro Ant.....	Wandering Jew.....	Red Indians and Arabs.
Sloth, <i>Formica Sanguinea</i> ..	Janet McLeod—Philoso- phical Transactions '67.	Negroes.
Beaver.....	Cheops.....	Americans.
None.....	Empress Eugenie.....	Parisians.

CHAPTER X.

SCHOOL PUNISHMENTS ENUMERATED. WHAT ARE THE BEST FOR DIFFERENT PURPOSES.

*"I too have oft from out the orbit dire
Of rod descending, jerked my hand."*

JUVENAL.

It is interesting to find our Teachers after thirty eventful centuries of Development and Reaction, come back to the conclusion that Solomon was wise. All our best schools may be said to "use the rod." But the rod plucked so unsparingly from Olivet, has developed into the taws or the raw-hide-switch. The cane puts too seductive a temptation into the master's hand to let out any anger, malice or revenge that may inhere in his natural heart. Even a mild application of it, moreover, leaves on certain cuticles (and most provokingly sometimes on those of the worst boys in the school) such black wheals and marks as sometimes afford a serious handle against a blameless master.

But if occasions to use the birch will occur in the best regulated schools, in the very best they occur the least often. It should be reserved, says Goldwin Smith, speaking as President of the Ontario Teachers' Association, for wilful idleness or disobedience. In one fine Township Academy of 200 pupils, the cane has only been used four times in four years; in others, once in two years and so on. And there is no surer sign (as a rule) of a disorganised school than the incessant *rustling of the birch*.

There is a case on record of a child of morbid organisation who died from excitement, produced by a very moderate whipping. Whereupon the recorder of the fact argued that corporal punishment should be abolished. But there has been more than one instance known of a child dying from a fit of temper, produced by the refusal of some childish (perhaps harmful) desire. But would any sane man argue that,

for this reason, a spoilt child should be allowed to go on having its own way. Teachers should, however, be very careful never to use a ruler in hitting a child, and never to strike one on the head at all. A mere ordinary box on the ears has been known to break the drum of the ear.

Of course boarders must expect and inherit many times more punishment than day boys. In many of our smaller High and Model Schools, to give good marks, or good conduct cards, for good conduct and perfect lessons,—publishing the results every month,—or even an occasional talking to, is found sufficient. Some call up an unruly big boy and say quietly, "You seem fidgety. Perhaps you want a holiday. Would you like to go home?" They often pay for their schooling themselves, and do not like to lose it, and a mere hint will help them to check the hot condition of their blood. Odd punishments are in vogue in some places. One of England's great exemplars was thought to be dying of consumption. Being poor, he wisely took to peddling. The open air cured him. He then taught, with a salary of £40 a year, and by his *savings* and personal influence endowed his school and built a church. His punishment was to swing up his boys in a small basket, head and legs protruding, like a cow being swung a-board ship. This often caused vomiting and seems to have been effectual!

We have heard of a Wanderer from the West, said to have kept his quiet school in Bolton, who never punished and never scolded. If a boy misbehaved, lo! a bowie knife dazzled his eyes with menacing gyrations and lodged between his hands or quivered in the wall behind his ear. A parent once entered his school with "Here's my two boys. Wollop 'em. Lick 'em. They wants it. But, dang you, do n't you kill 'em."

A noble girl once had to break in a lot of spoilt children. One baulked all her efforts, he was so incorrigibly restless, till she stood him on the floor, a book balanced on his head, with a penalty for its dropping

off. That taught him to keep still and he soon fell into the scholastic traces. The three last mentioned forms of punishment can hardly be recommended for imitation!

In some places the scholars themselves give in the number of times they have transgressed the ordinary school rules of silence, &c. This is supposed to breed "honour." But it is known to foster lying. The worst girls come out with the fewest demerits. One honest girl, too lazy to keep track of her crimes, gave in regularly twenty bad marks a week.

Statistics show that taws, ruler, or cane is used in about 70 per cent of our Provincial High and Model Schools. More or less "keeping in" is nearly universal. In one school, noise, chattering, &c., is stopped (as lucky people, say the Italians, have their meals,) "at the ringing of a bell." Other punishments are suspension, keeping in at recess or after school, sending home, reporting to trustees or parents, standing out on the floor or lines.

"Lines," spoil the hand-writing and often keep a boy in longer still, who broke rules from mere restlessness owing to his being kept in too long already. But they are a mighty convenience both to the over-worked and the indolent master. If any "lines" should be used, they should be round text copies.

For rank disobedience a boy should either kiss the rod or leave the school. For lying, thieving or cruelty, we prescribe a severe threshing, or change of school. Do not interrupt school work to punish. Note the punishment in a book and exact or inflict it afterwards, at recess or after school.

The ideal punishment is not yet found, not even in the pages of Wilhelm Meister. The Germans suggest "a form of muscular work not agreeable." "Drill," would be excellent but involves a good drilling master. When will the Scholastic Millennium come when delinquent school boys trot off repentantly to saw wood?

As to what punishments are best for different pur-

poses;—For talking, &c., in school, try standing out on the floor; round text copies to be written, and poems, &c., to be learnt by heart, out of school. For coming late to school keep the tardy ones outside the doors for fifteen minutes if the weather be not too cold or wet. In some cases it will be found enough to make those who come in behind time write their names on a card kept hanging up in the school-room for this purpose. If this seems to lose its effect wait for the beginning of a new term and impose some more severe penalty. For imperfect lessons try keeping in at recess or after school. For insubordination whip on the hand with the taws, report to the school managers or expel.

Finally, punishment should be certain, not long in duration, sharp enough to be well felt, seldom given to many at once, never inflicted in anger, and never inflicted on a child to make him do something and until he does it.

CHAPTER XI.

THE ART OF DISCIPLINE.

"And tho' she rules him never shows she rules."

POPE.

"Boys are miniature men." Of course the way to discipline them is to emulate the way in which discipline is best secured among men—that is, in the Army and Navy.

Obedience in battle, which makes men march to death for a "cause," which they understand little, and care for less,—obedience in great things, is secured by the *Habit* of obedience in small things; I mean, in daily drill.

Thus, orderly ways of behaving in class produce perhaps the habit of obedience. The habit of obeying

such orders as "Class sit!" "Class rise!" "Seats!" "Boys leave the room." &c., insensibly produces discipline. But an unpractised teacher must *feel his way* in such things and introduce such things by degrees.

How else may we emulate Military discipline? First let us note that as jokes are unknown to the parade ground and quarter-deck, so we should never joke in school, until *thoroughly* certain that we are *perfect* "masters of the situation."

Shorten the hours of work to five at least, but let work be work and never joke in school. A joke relieves the dominie-killing tedium of school. A joke often explains a thing as nothing else can. A joke is a lubricator whereby facts glide into the memory. But jokes are death to discipline.

The master cracks a good joke. How can he punish some witting pupil for essaying a bad one in repartee, which the class is sure to appreciate much better?

"Full well they laughed with counterfeited glee,
"At all his jokes, for many a joke had he."

Full often the class laughs at some pointless whispered gibe about the master, under cover of laughing at the excellent jest by which he fondly hoped to gain their admiration and good will. The two very best disciplinarians we have ever known in Canada *never* joked in school. In school they never unbent. Out of school familiar and pleasant enough, for its very rareness, their kindly word was amusingly over-appreciated.

Similarly all undignified expressions and the calling boys by their nick-name or even christian names, may be eschewed by the teacher, just as they are unknown to the officer.

Again, we may infer that those who would govern should be men of very few words. Even the hen that sits silent on an addled egg has a reputation for wisdom.

Speak low. To speak low to boys and then to take one of them (to scold or punish many together, has little effect or none) severely to task, for not obeying at once, works like magic. Tennyson's pretty line,

"Her low firm voice and gentle government."

should give Dominie the hint required. "Like master, like man." A loud voice in the master insensibly makes every voice and noise in the school louder. If the master speaks low the whispers of a pupil may be detected. It gives him a *reserve* of power, for when he does speak loud it startles and overawes from mere novelty.

Dress well and get the scholars to dress neatly. I know of two masters, whose power of discipline was a "minus quantity," who kept order for some time owing to the imposing faultlessness of their dress. A college gown is not without influence. Teachers should, more than other professional men, "starve the belly to feed the back." And many boys put on their good manners with their best clothes.

A great aid to discipline is to induce the Trustees to get the room put into excellent order and to see that the boys keep it so. The outbuildings should be made of unplanned lumber so as to check the disease of scribbling on walls, which has haunted boys ever since they went to school at Herculaneum and Pompeii. Ink stains can be washed off the tops of brown ash desks well varnished, and from oiled brown ash they can be sand-papered out and leave no trace behind.

AS TO DESKS,

arrange the scholars at them so as to separate those likely to be congenial in chattering and tricks. To move a chatterbox's seat to one among older, uncongenial boys, will sometimes make him silent as Procne. Perfect silence can perhaps hardly be se-

cured in our academies with ease to the master, but a near approach to it should be aimed at, except at well understood intervals.

It is hard to see how emulation can be secured without making the scholars take places in class and marking down the places, giving the last pupil "one" good mark, the next to the last "two," and so on. This will help to check irregularity of attendance, that bane of Canadian Teachers. A good English school would never dream of getting on without "taking places." Or nine marks (to save ever having to enter two digits in one column) may be given for good conduct, or each "perfect lesson," each day, and marks taken off for each offence or mistake. We know of one school kept in order by the simple monthly publication of such marks.

BOYS ARE STRICTEST CONSERVATIVES.

On making any new rule in school a teacher might carefully explain its advantage or necessity. When made, he must of course hold to it rigidly, right or wrong. If it does not work he may as well frankly say so and give it up. The enforced observance of good manners is too often grossly neglected in our schools. The Wykamist Motto is that "Manners Makyth Man." If a teacher fails to require the outward marks of respect from his scholars he will soon fail to secure the inner sentiment. Example here does much. A nobleman once taught his tenants to touch their hats to him by taking off his hat to them.

As to punishments, the less the better, so long as order is secured. See that the boys get plenty of hard exercise in field, garden or gymnasium, and they will be much less restless in school. Much better than keeping in is the reward of letting boys go at three p. m. in lieu of four, for good behaviour and when they have done an ample extent of work—which they will do with this stimulus. In six thou-

sand years the world seems to have got as hardened to the threat of punishment as a Public School boy's hand used to be to the cane, and the main incentive to good action seems to be the hope of sure reward.

Want of strict punctuality in the master saps the foundations of discipline, while to read a portion of Scripture or have prayers on opening school, has, apart from its other overwhelming recommendations, a magic effect on the discipline of the day.

To summarise. Talk very little. Speak low. Be punctual. Never unbend from a scholarly dignity of manner and parlance. Arrange scholars and school so as to promote order. Dress well and never joke until you are sure you have your pupils all thoroughly and completely under control.

CHAPTER XII.

HOW TO SECURE A HIGH MORAL TONE IN A SCHOOL.

"Talent divorced from rectitude is a demon rather than a God."

CHANNING.

To secure a high moral tone in a school the teacher must first possess a high moral tone himself. Like master like man; like priest like people; like teacher like taught.

A State Inspector once entered a school of high repute in Canada as well as in the States, which was apparently as perfectly administered as could well be conceived. Silence reigned supreme. The boys were well up in their work, and moved noiselessly about on tiptoe with the precision of soldiers. The very corners of the slates were encased in cloth, that they might not rattle against the desks. In looking at the scholars' faces our acquaintance conceived the

impression that he was in the midst of a set of hypocrites. The master, he knew, had been guilty of some "smart" business practises. But not till two years afterwards was it found out that under the fairest of faces the scholars were untruthful and vicious.

The most important thing to a man is the character of his children. "Education," said Locke, "is responsible for nine-tenths of a child's character," and teachers are plainly responsible for nine-tenths of a child's education." Hence the importance of securing, *at any cost*, a thoroughly good and conscientious man or woman to be the educator of our offspring.

The curious carelessness of parents in this respect is a marvel that dates at least from the time of Roger Ascham. Hear his pithy and pointed words:—

"It is a pity that commonly more care is had among men to find out, rather, a cunning man for their horse than a cunning man for their children. God that sitteth in heaven laugheth their choice to scorn, and rewardeth their liberality as it should. For He suffereth them to have well ordered horses, but wild and unfortunate children, and therefore, in the end, they find more pleasure in their horses than comfort in their children." Substitute the word "business" for "horse" in the above paragraph, and it will apply as freshly to our days as if it were written yesterday instead of three hundred years ago.

Fortunately, intelligent men and women have, as a rule, finer moral characters than blockheads, and in securing a good teacher we generally secure a good man.

One great way to make the young honorable is to treat them as if they were so. A boy's word should always be taken, unless the master sees he has the means of proving with absolute certainty that the boy has told a lie. When this happens, a *very* serious matter must be made of it. And every chance must be taken of speaking with the strongest scorn of falsehood, cruelty, dollar-worship, and every kind of dis-

honesty. The history lesson will often offer such chances. The foundation of a high moral tone is truthfulness. To produce this virtue a master must be strictly truthful himself. He must never lay claim, by implication or otherwise, to knowledge he does not possess. He must eschew and discourage exaggerations. He must not only *assume* his scholars to be truthful, but must throw in their way no temptations to falsehood. Making promises so often leads to falsehood that a careful teacher will exact few if any promises from his scholars, and warn them to be chary of making promises altogether.

Boys, when asked in a tone of confidence to own up publicly, if they have committed any offence, will generally do so. This strengthens the habit of truthfulness. If an offence has been committed, and no one will own to it, it is well, sometimes, to withhold some pleasure or reward from the whole school. We have known the perpetrators of an offence discovered by suddenly separating the members of a school a little from each other, and making each write separately on his slate all he knows of the matter. The guilty will then generally confess. This must not be tried too often.

To make boys honest, make them feel they are honest and be proud of being so. It is a good idea to make scholars bring any article they may find astray about the school, to the principal, and have it publicly owned with a passing compliment to the finder. Broken windows, &c., should be voluntarily acknowledged before the master asks any questions.

The careful educator must not only train his class to obey their consciences, but he must devote much careful thought to the means of educating their consciences. The folly, the meanness, the unprofitableness of vice and wrong-doing, may occasionally be pointed out. It is best to do this in a conversational way, asking questions and eliciting and criticising the real opinions of the class.

There is a good example of this "Socratic method" in "Abbot's Teacher." The master overheard some boys swearing in the playground. He waits a day or two, states what he has heard, naming no names. He then asked all who were willing to acknowledge whether they used bad language or not, to stand up; bade those sit down who were guiltless; bade those sit down who wished to discontinue the custom; spoke of the phenomenal difficulty of breaking off a bad habit, and asked them to try and think out some means of stopping the practice, and promised to try and think out some such means himself.

The careful selection of subjects for compositions may help to educate the consciences of the young.

Scholars can be made to write on the follies or vices prevalent in the school—the master cloaking his object by giving a grand title or philosophical nomenclature to the subject of the theme. The young will thus often find out for themselves the meanness or inanity of any, otherwise, pet foible.

A writing copy may occasionally (though rarely) be used for this purpose. We knew of a school-boy who had the happy (?) knack, learnt in New York, of being constantly impudent to the master in a subtle way, which it was almost impossible to punish. At the same time he was most officious in paying little attentions to the teacher, in handing him book or chair, &c. Long-suffering Dominie one day quietly wrote him the words "crawling impudence," for a round text copy. The lad wrote a line or two unsuspectingly, till, by some mysterious system of school-boy telegraphy, the joke crept round the class. All eyes turned to him derisively, for he was no favorite, and for the first time he blushed. The final result justified the dictum of Terence, "*Erubuit, salva res est.*"

To rebuke a boy publicly is of little or harmful effect. The dull get case-hardened to ill-repute among others. The sensitive suffer too much from the fear of shame, in any case. Boys too have a ten-

dency to feel shame for the wrong thing, for a bodily defect instead of for moral vices. The sense of shame should not be systematically developed. What are bitterly needed now-a-days are men trained to independence of mind, men who care for the approval of their own free conscience, and not for the "vulgar breath" of any crowd that happens to be around them.

To take away a boy's self-respect is to lose the one means of his improvement. Find something in him of which he may be justly proud, and use that sound, untainted part to work upon, in trying to improve the whole. Persuade a boy he has a repute for anything, and he will try to keep up his reputation for it.

It improves the character to find for it improving things to do. It has done some big girls good to give them each some one little girl to look after and help. Get your scholars to help you, and they will soon love you. Get the bigger scholars to assist to keep order or teach in the school, and you will soon find them enlisted on the side of discipline and good instruction.

Self-knowledge is a great means of improvement in character. A teacher should see a great deal without seeming to see it. But he should forget nothing which may help him to get a thorough knowledge of each pupil's character. Then, on rare occasions, a good, long, affectionate talking to, may work wonders. Kingsley mentions an instance where a boy found out that he was mean and cowardly and a liar, and set himself humbly and manfully to work to cease to be so, till he grew up to be noble and truthful and courageous, "*sans peur et sans reproche*."

It is great thing for the moral character to take plenty of outdoor exercise. Athletic sports are the very salt of English University and school life. A master should stimulate the boys to take an interest in school games.

Late hours injure the health, and therefore the moral tone. A master should forbid his pupils to study after nine or half-past nine at night.

Music not only soothes but refines and elevates the boyish breast. It is said that the natural scale of musical sounds can only produce good and kindly feelings, and the scale must be transposed if you would call forth sentiments of a vicious and degraded character. In German reformatories, music has been found one of the best means to induce docility among the vicious. Music, indeed, is not all powerful. The ways of choristers are not always as white as their surplices. But perhaps choristers get too much music, and the law of reaction sets in. Perhaps, too, their moral sensitiveness gets callous by a too frequent handling of holy things. The general law, however, is certain, viz:—That singing has, on the whole, an improving effect on the character, and should be practised in every school.

A tendency to be cruel to the lower animals may sometimes be checked by the microscope. A lad is not so likely, lightly to maltreat them after seeing the marvellous beauty of every astonishing detail of their mechanism.

A potent means to influence the young for good is to put good story-books in their hands to supplant the trash they will otherwise devour. Every school should have a library, and every school library should contain the works of Tom Hughes, Kingsley, Marryatt, Cooper, Dickens and Walter Scott.

But after all, all may well prove ineffectual so long as the daily practice of prayer and Bible teaching is forbidden or disregarded. Religion is all in all or it is nothing. We profess that it is something by the very act of going to church. If, therefore, we do not practice it daily in our schools in a quiet business-like way, by religious exercises and religious instructions, then our practice belies our principles, and we train our children to regard lightly all the week what we unctuously lay down to be all-important on Sunday.

Well spoke George Washington when he said "Reason and experience forbid us to expect that national morality can prevail in exclusion of religious principle."

CHAPTER XIII.

HOW TO MAKE A CHILD TO LIKE TO COME TO SCHOOL. HOW AFFECTED BY LENGTH OF SCHOOL HOURS AND BY SCHOOL APPLIANCES.

"A School ought to be a noble asylum, to which children will come with pleasure, and to which their parents will send them with good will.

Cousin.

The reason why children do not like to come to school is that they are happier elsewhere. Once make a child happier at school than if he stayed at home and the day when school opens will no longer be "Black Monday" to him.

What then makes a child happy? Play, bright surroundings, physical comfort, being told things he wants to know, and, above all things, sympathy.

PLAY.

The real difficulty in attracting a lively boy to school is the undeniable fact that he prefers play to work. "I do so hate my lessons!" would be the open confession of many a clever boy. Vigorously to apply the mind is hard to begin with, just as it ends with yielding the greatest pleasure in life. The parent must insist on the son's going to school, the teacher must insist on the lessons being learnt—that is the beginning of all education.

It is natural to animals, it is natural to children, to love play. Where boys if they stay at home are forced to work hard in the workshop or on the farm they generally like going to school. A boy who "hated lessons" was cured by being apprenticed to a blacksmith for a week. But the love for play may be taken advantage of, to make school pleasant. Stimulate the boys to get up games during recess, and before and after school. Provide them with gymnastic appliances however rough and ready. This was actually found at Hull to increase willingness of attendance.

"Taking places" introduces a very desirable form of play into the actual saying of lessons. It also promotes order in class.

There is an old saying that "one way to an Englishman's heart is down his throat." And truly the esophagus seems to afford only too ready an access to the hearts of the young. A yearly or half-yearly picnic or pleasure party helps, by force of association, to make children like their school. It also aids in generating a sort of *esprit de corps*, which may be utilized for good.

BRIGHT SURROUNDINGS.

Keep the school-room exquisitely neat. Never be content till its walls are hung with a few brightly-coloured maps and tablets. Grow a few flowers in boxes, in summer, and encourage the scholars to bring you a little nosegay now and again. They will learn to love you by doing the acts of love. If they love the teacher they will love the school.

Life is brightened by song. No school-day is complete unless it is enlivened with song just as the attention begins to flag, and the mind to recoil from study.

PHYSICAL COMFORT.

\ No child can be happy long without being comfort-

table. For comfort a frequent change of posture is necessary. Children when left to themselves stand a good deal more than they do at most schools. Hence they should generally stand when saying their lessons, and, if they like, when learning them.

One great cause of a feeling of physical oppression at school is the unnatural depression of the diaphragm when leaning over a desk. The young should be taught to sit as upright as possible, especially when writing. Their shoulders should always be well thrown back, and their chest well expanded. A little drilling is a great thing. At some lessons, they should stand with their arms hanging by their sides, at other lessons with their hands behind their backs, and at others again with their arms folded behind them. Variety is the spice of life. Seldom if ever should a lesson last more than twenty minutes, and at each change of lesson there should be a change of posture or place in school. A change of room is a great thing, where feasible, to enliven a long school morning.

The desks should be comfortable. Foot-rests are desirable, for there is always a stratum of cold air close to the floor, and cold feet send the blood to the head and depress the vital action. Children should never be allowed to sit on benches without backs to them, and these backs should slope slightly backwards out of the perpendicular. The edge of the seat should be plumb—or in the same vertical line—with the edge of the desk. This is the position in which we naturally put a chair when writing at a table.

Foremost of all requirements for physical comfort, the school-room must be well ventilated with openings as near the ceiling as possible.

DESIRE OF KNOWLEDGE.

There is a natural desire for knowledge in all minds,

only it has to be turned into the proper channels. Children may be expected to like learning.

1. If they are taught what they can be made to want to know.
2. If they are taught ideas, and not mere words.
3. If they are taught no one subject, and in no one place, for too long together.

It was the deliberate opinion of the Protestant teachers of the Province of Quebec assembled in Montreal in 1876 that "five hours a day and five days a week is the right time to keep school." The arguments adduced in favour of these shorter hours were incontestable. Where they had been adopted both in town and country, they were found to have worked most successfully. As the last feather breaks the camel's back, so it is the last hour between three and four in the afternoon which destroys all relish for school. This last hour causes often more trouble to the teacher than all the rest put together. By thus shortening the school-day a teacher has an hour for an extra class or refractory pupil if necessary; otherwise he has not, for keeping scholars in till five p. m. is known to injure the health. Shorter hours promote work done at home alone, which is invaluable for mental and moral discipline.

It is absurd to expect children to like school-work if they are kept at it for a length of time which is contrary to the laws of their physical and intellectual nature.

SYMPATHY.

Sympathy touches "the electric chain with which we are darkly bound." It is the thing which best satisfies (for a time) those cravings after the unattainable, which show we are made for a higher world than this.

How few children get it even from their parents or their school-fellows! It is the good teacher's

blessed privilege to give it more or less to all her scholars. It blesses her too in the giving. It blesses those who give and those who receive it.

Every time the intelligent teacher praises or blames, she can show sympathy. Instead of punishing stupidity let the teacher try and realise the difficulties of the young learner, and do her best to remove them.

A teacher should not restrict her social intercourse to a few—much less to one—of her scholars, but try and have a walk or chat with almost all of them in turn. They will often, unasked, tell her of things going on in school of which she never dreamed. A few words from her will at times remove strange misconceptions. She must also systematically visit their parents.

By getting her scholars to help her in little ways a teacher can often win *their* sympathies. It is a law of our human nature that we love whatever we benefit and help.

By showing interest in her scholars a teacher will often, in running across them in after life, be greeted with a kindling eye and an amount of affection and deference which was altogether unexpected. *Ex pecto crede.* And many a dull scholar will love to go to school, when sure of meeting with a dole of sympathy, however small, from a considerate teacher.

CHAPTER XIV.

SCHOOL HOUSE AND SCHOOL APPLIANCES.

"None but a genius can do good work without good tools, and geniuses are mostly useless."

We will describe the best form of school-house we have seen for a school where two teachers are employed. It had two stories. The upper story contained a room for the girls. The ground floor contained the room for boys and a class room. The

entrances were at the gable end of the building which faced the south. One entrance-door, on your left hand as you faced north, was for the girls, and opened almost directly on to the stairway leading up-stairs. The door on the right opened into a passage ten feet long which acted as a porch and for a hat and cap room for the boys. Between this passage on the extreme right or east side of the building and the stair-case on the left, was a class room which communicated by one door with the stair-case, and by folding doors with the down-stairs school-room.

The principal took care of the boys down-stairs. The girls were up-stairs under the lady-teacher who was qualified to teach singing and drawing. When the girls attended the mathematical and classical classes down-stairs they passed into the lower room through the class room.

A two story shed can be attached to the north end of this building, and the closet for the girls be in the upper part of it and thus kept quite separate and distinct.

In all cases the teacher's desk should be at the north end of the school-house and the scholars should all sit facing it. There should be no windows in the north wall. No one should sit with light facing him, and there should be as few windows and doors as possible on the coldest side of a building.

The prime necessity of a school-house is good ventilation. Carbonic acid gas is poison and every school-boy is giving it off copiously with each breath that comes from his mouth all day long. Bad ventilation causes depression always, disease often, and at times premature death. Teachers or commissioners who suffer children day after day to attend badly ventilated school-houses are unconsciously guilty of manslaughter. We cannot speak too strongly on this point.

Next, to securing good ventilation is the securing of it without draught; what we want is good air and warmth combined.

Now the outer air, admitted low down in a building, passes straight to the stove-draught, chilling the lower extremities of the occupants of the room on its way, and passes straight up the stove-pipe without being breathed, or oxygenating our blood, at all. The lower part of a school-room, the door way especially, should be made as air-tight as possible. Admit air high up in a room. Make it pass through a pipe or shaft *upwards from without*, and strike against the ceiling; there is then no draught on the person. The warmest air in a room is that next the ceiling. Cold air is heavy. On entering a room high up, it sinks through the stratum of hot air next the ceiling, gets warmed by it, and on its way downwards we get a chance of breathing it.

It is plain then that the ventilation of a room should be by pipes passing through the wall *inwards and upwards*, and as near the ceiling as possible. A single window lets in cold with very little air. Double windows with an opening near the top (the inner window being also open at the top) let in air with very little cold. The single window affords surfaces which are very cold and give out cold, just as a stove affords surfaces which are hot and give out heat.

But with double windows (the still air between the outer and inner sash being a non-conductor) the surfaces of the inner window will be found comparatively warm. The school stove should be close to the door. A pair of elbows in the stove-pipe, near the stove, will increase the heating power 30 per cent.

Let then the windows of a school-house be always open at the top, but in the winter save fuel by a double window. Double windows save fifty per cent per annum on their prime cost. A thermometer is a useful thing in a school room. It should range from 60° to 65° Fahrenheit.

The desks of a school are generally three feet six inches long, but, if four feet long, they will hold two comfortably, and three at a pinch. The top or slab of a

desk should be 14 inches wide, and have a shelf underneath to hold books. The upright front of the desk should be about 30 inches high, and should form the back of the seat of the scholar sitting next in front, which seat should be made in one with it. It should tilt a little backwards, and the seat may tilt a little downwards at the back. A vertical section of a desk, such as we describe, may be seen by referring to figure 13 of the Frontispiece to this book. Such a desk costs between two and three dollars, if of brown ash.

The desks should be arranged four in a row with passages between them running lengthwise through the room. None of these passages should be less than fourteen inches wide, while the middle one may be three feet, and the outside ones, next the walls, should be two feet in width, at least. This will require the school-house to be between twenty-five and twenty-six feet wide. For its length we must allow thirty inches for each row of desks, ten feet for the master's dais and space in front of it at the north end, and five feet at the entrance or south end. Hence a school room 30 feet long will have six rows of desks, and seat 50 scholars, or, at a pinch, 70 scholars, putting three at a desk.

A school-room 45 x 25 will seat 100 scholars allowing them 11 square feet of floor space, and between 110 and 150 cubic feet of air space, according to its height. Ten feet of floor space and a hundred cubic feet of air space are the least amounts consistent with the barest requirements of health.

The desks should be of brown ash, (the "forest marble" of Canada) the sides and seats being oiled, and the tops well varnished with shellac. Ink stains wash off from a shellac surface, and its effect on the edge of a knife suggests to school boys the folly of carving the desks.

Brown ash looks very handsome, and will be found cheaper in the end than soft wood for desks and that

wainscoting (or "sheathing") which must run round the walls of every school house, to the height of three feet from the floor, to protect the plaster.

The *cacoëthes scribendi* which has infected school boys since they scribbled obscenity on the walls of Herculaneum and Pompeii, is cured by having the outbuildings and woodwork near a school either of unplanned lumber, or "sanded," instead of being painted. If painted, dark French Grey is a good colour.

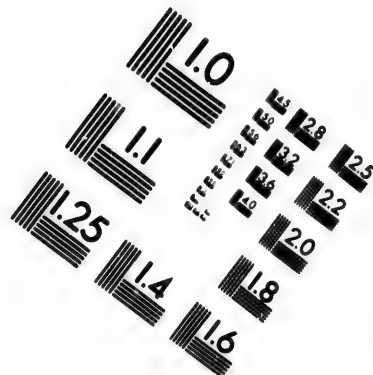
The other equipments of a school may be divided into—1. Things indispensable. 2. Things very desirable. 3. Things desirable.

It is very desirable that the school should have attached to it a fair-sized play ground, well fenced, surrounded with shade trees, and provided with gymnastic appliances. A school-clock (its face secured by a lock) and a school library are such advantages that they almost deserve a place among things indispensable. It is also most desirable that the Secretary-Treasurer see that the teachers have access to his copy of the Journal of Education.

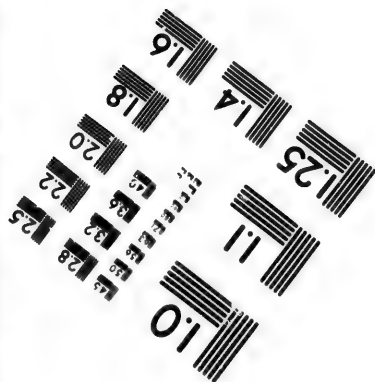
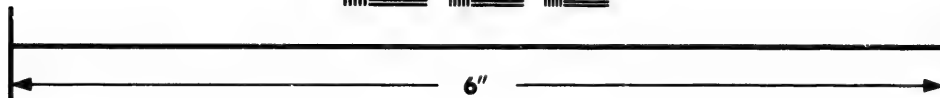
It is desirable that prizes should be provided by subscription or otherwise to be competed for at terminal examinations. A big bell is desirable for an Elementary School and very desirable for an Academy. A bound school register for abstracts of monthly attendance, lists of prizes awarded, records of the judgments of inspectors and visitors, is required in most countries by governmental regulation. Flowers in boxes on the window sills, and bright picture tablets on the walls, have an excellent effect on the school.

As to things indispensable, no teacher should rest contented till she has a desk properly provided with lock and key and raised on a dais which must be at least a foot in height. She should claim them as a right, and press her claims. The teacher should also secure plenty of hat-pegs for her scholars and one for herself, and each scholar should have and use his or her own peg.





A resolution test chart featuring several groups of horizontal and vertical lines of varying thicknesses. Each group is accompanied by a numerical value indicating the resolution. The values include 1.0, 1.1, 1.25, 1.4, 1.6, 1.8, 2.0, 2.2, 2.5, 2.8, 3.2, 3.6, 4.0, 4.5, 5.0, 5.6, 6.3, 7.1, 8.0, 9.0, 10, 11.2, 12.5, 14, 16, 18, 20, 22.5, 25, 28, 32, 36, 40, 45, 50, 56, 63, 71, 80, 90, 100, 112, 125, 140, 160, 180, 200, 225, 250, 280, 320, 360, 400, 450, 500, 560, 630, 710, 800, 900, 1000, 1120, 1250, 1400, 1600, 1800, 2000, 2250, 2500, 2800, 3200, 3600, 4000, 4500, 5000, 5600, 6300, 7100, 8000, 9000, 10000.



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The School Journal is the property of the School Commissioners, and when filled must be carefully kept on record by the Secretary-Treasurer. Equity, therefore, as well as law, directs that it should be provided by them. The best (for their price) we know of, are those which can be got by writing to the *Gazette Office*, Sherbrooke, P. Q. They cost twenty cents a piece, or \$1.75 a dozen.

Geography cannot be taught without maps. Those of the size required can be obtained from Dawson Bros., Montreal, or Williams & Williamson, Toronto, for about \$3.00 each, or less. If one only be got, get "The Two Hemispheres."

As well as, or instead of, a blackboard, large spaces on the walls should be painted with "Canadian liquid slating." This is procurable for \$1.50 a gallon. A gallon paints eighty square feet. Common black paint, whether applied to wall or board, makes too "glissant" a surface.

The MacVicar apparatus is very useful for arithmetic, but expensive.

A uniform set of text-books is a great desideratum in a municipality. We confidently recommend the following:

Arithmetic, Smith & McMurchy 25 cents, Sangster 25 cents. Book-keeping, Fulton & Eastman 50 cents, Johnson 35 cents. Euclid and Algebra, Todhunter 60 cents. Mensuration, Sangster. Geography, Hodgins \$1. Canadian Atlas, 25 cents. English Grammar, Lennie 15 cents, Davies 25 cents, Morrison 30 cents. History of Canada, Miles 30 cents and 50 cents. Collier's Great Events of (ancient) History 75 cents. Maclear's Sacred History, 2 vols., 30 cents each. Collier's British History, 50 cents.

For Readers, use the Upper Canadian Series, Books I. to V. price 15 cents to 60 cents. (The errata in the last editions should be corrected.) Mavor's Spelling Book is deservedly a favourite. Bell's Elocutionist, \$1, contains almost *all* the best poems by England's (that

is the world's) best poets. French, Duval's French Grammar, 40 cents. Duval's Reader, 30 cents. Miles' History of Canada in French is *doubly* useful if used as a French Reader.

Dawson's Agriculture (50 cents) and Zoology \$1.25, and "McMillan's Primers" take the lead in science.

For Singing, Sefton, 30 cents, is a marvel of cheapness.

In claiming or supplying any of the appliances mentioned, teachers and commissioners should remember that "good work needs good tools." Of all places where it is important that work should be done well it is most vitally important in a school-room.

CHAPTER XV.

GYMNASTIC APPLIANCES. WORKING SPECIFICATIONS TO MAKE THEM CHEAPLY AND WELL.

"The mind should exercise a gentle, but no despotic control over the body."

ARISTOTLE.

The advantage and importance, physically and therefore morally, of gymnastics, is obvious to all who have bestowed a thought to the subject. Of all the country High and Model Schools in the Province of Quebec they were in 1875 found in Hull alone. There they were found to draw scholars to the school, to make them come in good time and to improve their physique, their manly bearing, and grace of movement.

An objection has been raised that gymnastics are dangerous. The power they have to brace the character arises from the fact that they seem dangerous

and are not. Few things give dignity and self-respect more than the sense of danger calmly and voluntarily undergone. We have known the history of several large gymnasia for some years, and have only heard of one accident in them all, while casualties from cricket, from foot-ball, and even from walking in the streets, are known to everyone. The teacher who refuses his scholars the advantage of gymnastics, so healthful physically and morally, for fear of incurring a little blame from the narrow-minded, must himself be of a pitiful spirit indeed. We look forward to the time, when instead of one country school in the whole Province of Quebec with a swing and giant's stride, there shall be hardly one "Superior School" without them. Suffice it to say that gymnasiums are found in the foremost seats of learning in the world.

The following plans and specifications of safe gymnastic appliances suitable for schools have been drawn out after careful consultation with the very best authorities on the subject. The object in them has been to combine cheapness with durability. They are suited both for out of doors and for indoor use. The figures referred to will be found in the frontispiece.

FIG. 1—THE PARALLEL BARS.

pppp. 4 posts ($3^0 9'$) of $4' \times 4'$ cedar tapering on the outside towards the top to $4' \times 2'$ so as to be flush with

bb. 2 bars (10^0 long) of $2' \times 4'$ spruce, a mortice $\frac{3}{4}' \times 4' \times 3'$ is cut into these bars, into which tenons on the posts pppp fit, to hold all together.

The distance between the bars inside is $18'$.

dddd. are braces with a two-foot run.

ss. 2 sills (6^0 long) of $5' \times 5'$ cedar into which the posts pppp are mortised. Extreme height of top of bar from the ground, $3^0 10'$.

The bars project $14'$ beyond the posts so that the two sills are $7^0 8'$ clear apart.

Price, about \$5.

FIG. 2—THE RINGS.

pp. 2 posts of 5'x5' cedar, 12⁰ high above ground, 3⁰ underground, (15⁰ in all) fitting with 2'x5'x4' tenons into mortises in

c. a cap (5⁰ long) of 5'x5' cedar. The tenon is only 4' high so as not to go right through the cap. This saves rotting.

rr. rings 5' in diam. of $\frac{1}{2}$ ' wire curved at the top (as in Fig 3) for the last link of ch. ch., chains 7⁰ long of $\frac{1}{4}$ ' wire with hooks at top so as to enter securely into staples in c. the cap. Extreme height of the top of the cap from the ground 12' 1'.

The rings will be 4' 8' from the ground and 16' apart. Price about \$8. The rings costing about \$1.

FIG. 4—THE HORSE.

b. a log, rounded, with 4 legs, extreme height about 2' 9' from the ground, of spruce 9' or 11' in diameter.

oo. are round holes about 4' deep sunk in the horse, into which are screwed

hh. handles of hard wood.

Price, about \$3.

FIG. 5—THE RUSSIAN SWING.

pppp. 4 posts 15⁰ long (12⁰ above ground, 3⁰ under) of 5'x5' cedar, with tenons 5'x2'x4' mortised into cc. caps of 5'x5' cedar, as in Fig. 2.

rrrr. 4 rods $\frac{3}{4}$ ' wire (10⁰ long) fitting with hooks *securely* into staples in cc. the caps.

The rods are fastened firmly with staples to

k. a plank 12'x12'x2' of planed spruce, oiled, which will swing 1' 8' from the ground.

Extreme height from ground 12⁰ 1'. Distance between posts 3⁰ inside.

The plank projects 2⁰ beyond the two sets of posts, which will therefore be 8⁰ apart.

Price, \$12 to \$13.

FIG. 6—HORIZONTAL OR VAULTING BAR.

pp. 2 posts 15' long (13^0 above ground, 2' under) of 5'x5' cedar, mortised into

sss. 3 sills (one 12' long, and two of them 5' long) of 5'x5' cedar, and braced to them every way; the posts are also mortised into

e. a cap 8' long of 5'x5' cedar, as in the "Rings" and "Russian Swing."

Three feet from the ground two strips of hard wood (2' long) are spiked on each post ($1\frac{3}{4}'$ apart) of $1\frac{1}{2}'$ stuff projecting 2' from the post; in these are bored holes of $\frac{3}{8}'$ bore, 3' apart, into which pass pins, ff, chained by a chain 2' long to the posts.

Between these strips of hard wood is

b. a round bar which can be moved up and down, $1\frac{3}{4}'$ diam., of hickory or white ash, and sheathed with a square ferule of iron $1\frac{3}{4}'$ square and 2' in length; through each end is bored a hole of $\frac{3}{8}'$ bore (see fig. 7) and the pins pass through this and the holes in the projecting pieces of hard wood, and keep the bar at any height required.

The bar may be made a fixture, whereby a saving in cost is effected.

Extreme height of top of cap from the ground $13^0 1'$.

Price, \$6 or \$7.

FIG. 8—ROUND-ABOUT OR GIANT STRIDE.

p. a pole of cedar (barked) 19' long, 3^0 of it being firmly planted in the ground; the upper or small end is 6' in diam., upon which is driven

b. an iron band $1\frac{1}{4}'$ x $\frac{3}{8}'$.

t. a top piece with 4 hooks (as in fig. 9) of $\frac{3}{4}'$ iron, which revolves on

c. a centre with a solid shoulder and body tapering to a point (as in fig. 10.)

rrrr. 4 ropes $\frac{3}{4}'$ knotted at the lower ends which

nearly reach the ground; the upper ends are furnished with thimbles (as in fig. 11.)

Price, about \$4.

FIG. 12—SWING.

pp. 2 posts 14' long of 5'x5' cedar mortised into
sss. 3 sills of 5'x5' cedar, and braced every way and
buried 2' in the ground.

c. a cap of 5'x5' stuff mortised so that rain cannot
enter to rot the tenons on pp.

b. a round bar with shoulders to keep it in its
place as it moves with

ww. wires $\frac{1}{2}$ ' or $\frac{5}{8}$ ' which are securely fastened to
s. the seat, which is 18' from the ground.

Price, about \$5

A see-saw and a long narrow pole two feet from the
ground, supported on posts, on which boys can learn
to balance themselves as on a tight-rope, will be
found cheap and favourite appliances.

CHAPTER XVI.

NECESSITY OF CHEERFULNESS IN A TEACHER. PRACTICAL MEANS TO CULTIVATE IT.

*"A merry heart goes all the day.
Your sad tires in a mile, oh!"*

SHAKESPEARE.

Cheerfulness is the teacher's greatest difficulty, his
main duty, and, we may hope, his ultimate reward.
The scholars all sympathise unconsciously more or
less with him, and any brightness in his face is re-
flected in the faces around him.

*"A universal largesse like the sun,
His liberal eye doth give to everyone."*

Childhood is naturally bright. Children do not know the dark side of this world, and it must be kept as long as possible from their eyes. To a boy the world is full of wonderful promise of joys whose very nature he does not stop to conceive. The teacher must, as Oliver Goldsmith says in the *Vicar of Wakefield*, "be ever lenient to the innocent delusions which tend to make a fellow-creature happy."

The teacher must throw aside all gloomy thoughts on entering the school-room or he will be out of sympathy with all inside it. He must reflect that he is not responsible for the progress of his scholars, but only for doing his duty. He must be cheerful, too, that he may expect cheerful obedience in them. If we smile at the world, the world will smile at us, and much more will the young do so. Other forces may drive, but it is the teacher's quiet sustained cheerfulness that is to attract scholars to the school, that is to attract scholars to himself, to their lessons and their duty.

The teacher must see the bright side of everything; and, after all, everything has a bright side. All blessings are given us richly to enjoy. Troubles are but blessings in disguise. The sun shines in the highest heaven unaffected by all the storms of earth; the darkest cloud has a silver lining, and the blackest hour of night is the one just before the morning.

The teacher, if any one, has reason to be cheerful. The only real troubles in this world have been said to be two—sin and debt. The teacher knowing the exact amount of his salary, and receiving it for the most part very regularly, is not often in debt. As to sin, the teacher's profession can be kept more unspotted by the world, perhaps, than almost any other on earth.

Cheerfulness is affected by habits of mind and by habits of body. In mind the teacher must look on the bright side of things, must take things by the right handle, and must apply Wordsworth's favourite

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text: "In everything give thanks." Many of the little troubles of this life are much lightened by looking at them in a comic light. In the words of *Figaro*, "We must make haste to laugh at everything for fear we should be forced to weep." To help him to see vexations in their laughable aspect, the teacher should read frequently the works of the great humourists, Shakespeare, Moliere, Swift, Dickens, Thackeray, Walter Scott and Sydney Smith. As the last-mentioned happily suggests, any one may well hope to succeed in being humorous by a severe study of humour. "For if a man," Sydney Smith says, "apply himself to the study of wit for six months with that application which he would give to the mathematics he will hardly fail in turning out an accomplished wit."

Sad books, too, may be well eschewed by the teacher. Besides its depressing tendencies, mourning over imaginary sorrows is the most heart-hardening thing in the world. A teacher must avoid all melancholy sentimentalism and, as much as may be, all gloomy companions.

But, after all, humiliating as the fact may be, our cheerfulness depends very much on our bodily health. If the health be vigorous the spirits are elastic. There is an exultant buoyancy of animal spirits caused by a brisk and unimpaired performance of the animal functions which nothing else can give. To secure this we subjoin some practical rules, the results of the united wisdom of half-a-dozen doctors.

RULES TO KEEP CHEERFUL.

1.—Live in the open air as much as possible. The open air, especially where you can get a good broad sweep of it, is *Life*; the want of it, *Death*.

2.—If a woman, do some housework. It is the natural work of woman, and those who shirk it fall into unnatural disorders and sicknesses.

84 NECESSITY OF CHEERFULNESS IN A TEACHER.

3.—The room you occupy must be sunny and airy and bright and light; and should be lofty.

4.—Never be in a room by night or day (unless it be very cold or damp,) without the window being open at the top. If endurable open it top and bottom. Closed windows save fuel and cause death. The air should be admitted inwards and upwards.

5.—Take all the exercise you can, short of absolute fatigue.

6.—Sing, and inhale lungfuls of breath, once or twice daily.

7.—Ensnue early hours, cheerful company and pleasant little excitements, and plain food. Avoid everything indigestible. Beware of quack medicines. Touch them not; taste them not, and handle them not, except to throw them away.

8.—Teach yourself to enjoy scenery and walks in search of it.

9.—Bathe, walk, ride and drive. Rub the body hard, night and morning, with the hands. Always get the body into a glow after your bath or sponge bath. If you cannot get a glow after bathing, do not bathe. Have flannel next the skin from head to foot.

10.—Go through calisthenic exercises, night and morning when undressed, or half dressed. That is, throw the arms and elbows back, in various ways, in such a manner as to open the chest, inhaling lungfuls of fresh air the while. Lady teachers will find it harder to carry this out regularly, than to swallow pints of nauseous medicine, but *most* beneficial in its results.

Teachers are apt to suffer from sleeplessness which makes it almost impossible for them to be cheerful. The best cures for it are to be in the open air as long as you possibly can without fatigue. A bath in hot water, with a good sprinkling of mustard in it, or a hot stick of stovewood applied to the feet will often draw the blood from the head to the extremities and bring on sleep. Cold feet often prevent sleep. A

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pillow stuffed with hops makes some people sleep. A change of scene, a change of bed, or a hearty supper, as they will sometimes interfere with sleep, so they will sometimes bring it on. Sleepless people should stay in bed longer in the morning, and keep early hours. They should also avoid alcohol or anything, physical or mental, which excites the brain.

After all, one of the best general cures is a sure trust in Providence, and a certainty that all things, even the passing fit of sleeplessness, is somehow working mysteriously for good.

CHAPTER XVII.

THE CONSOLATIONS OF A TEACHER.

*"Light lie the turf above our fathers' head,
Who even to the Teacher paid all honour due!"*

JUVENAL.

It is the "much-despised teachers' trade" of Canada which is shaping its whole future history. It is education which "forms the National mind," and as our nation's twigs are now being bent, in many a quiet school-house, so will incline the future National Tree.

How hard a thing is perfection! And yet that act is *perfect* which gives innocent pleasure, and that moment of our lives is absolute perfection itself, during which we are making others happy. How then should we honour the teacher in hearth and hall if we believe Washington, that "a nation's happiness depends in the long run, on its education," or Solomon, when he said, "the price of wisdom is beyond rubies." Solomon saw, a thousand years before Christ, that to educate a nation is to make it happy. We are only just beginning now, to find this to be true.

"The work of a teacher," said Luther, "is more potent than that of preacher. Having a call to the *inferior* office of preacher, I reluctantly forego the superior office of teacher." Such is the unchangeable force of past habits, that a clergyman's task in the pulpit, often seems like that of one who is trying to alter the shape of a church-ful of anvils with a tack-hammer. The very people the preacher wants to abuse for not coming to church are not there to hear him, and those poor patient souls who trudged to church to get a crumb of Gospel comfort, get somebody else's scolding instead!

Not thus the school-master! Woe betide the truant who stays away from *his* lectures. He has no cast iron to hammer into shape, but plastic clay to mould, and it, as moulded, dries as hard as the bricks stamped with the "laws of the Medes and Persians which cannot be altered," break them as you may.

A law seems to have gone forth against the uneducated, like that against Canaan of old, "and a servant of servants" are the ignorant to their brethren. All the world over the unlettered are mere hewers of wood and drawers of water to the educated and the learned. Our teachers are, under a common Father, the true creators of mankind. So true is it, as a novelist of France says, "From the time a man learns to read and write he must date his existence." He adds truly, "The man who knows nothing goes through the world like a beast of burden. He works for others, he helps to increase the wealth of others, and when he gets sick and worn out others get rid of him."

Another says, "He who would see God in all things, must value every particle of knowledge that may help to see Him, as a grain of gold. Is it not the teacher who goes through the world scattering those golden grains?"

Teachers, moreover, are the main instruments to prevent the growth of pauperism, idiocy and crime.

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There is the closest connection between the increase of education and the decrease of crime. In England, in 1851, one child for every 79 of the population was under instruction, and one man in every 485 was in prison. Twenty years later one child in every 13 persons was under instruction, and only one man in every 1,480 was in gaol. Education increases five fold, and crime decreases by *more than two-thirds*. And it has been recently proved that since the partial introduction of compulsory education, although the population increases rapidly, crimes are, not only proportionally, but actually, on the decrease in the British Isles.

In the year 1826 there were in uneducated Spain 1,233 convictions for murder; in England and Wales, with about the same population, there were only (13) thirteen.

Dr. Elisha Harris has with infinite pains hunted up the records of the descendants of one uneducated, neglected, child. Her name was Margaret. From her he has traced 628 descendants more or less remote. Of these he can prove a great number to have been idiots, paupers and prostitutes; parasites that is, sucking the life-blood of the body politic. But actual county records show that no less than *two hundred* have been absolute criminals. He estimates that this one uneducated child has cost his country not less than one hundred thousand dollars. Truly, prevention is better than cure.

Let not our teachers be discouraged. What if the teacher or mind-moulder in Lower Canada gets an average wage of less than \$450, while the machinist or metal-moulder gets \$600 at least. That teaching is not rewarded in this life, is a humble encouragement to hope that it will be rewarded in the next. Hear some of the greatest words of one of the greatest men France has produced in five decades, "The teacher," says M. Guizot (in uttering his fiat that rural France shall be educated, having been uneducated before,)

"the teacher must rise above the fleeting quarrels which agitate society. Faith in Providence, the sanctity of duty, respect for the laws, the prince, and the rights of all;—such are the sentiments he must seek to develope. The teacher's consolation must be within himself. There is no fortune to be made, there is no bright honour to be plucked, in the painful obligations which the teacher fulfils. Destined to see his life pass away in a monotonous occupation, sometimes to be experiencing the injustice or ingratitude of ignorance, he would often be saddened, and perhaps would succumb, if he derived courage and strength from no other source than the prospect of merely personal reward. He must be sustained and animated by a profound sense of the moral importance of his labours. The grave happiness of having served his fellow-creatures, and having contributed unnoticed to the public weal, must be his consolation. This, his conscience alone will give. It is his glory not to aspire to aught beyond his obscure and laborious condition, to exhaust himself in sacrifices scarcely known to those they benefit; to toil in short for man, and to expect his recompense from God."

CHAPTER XVIII.

SCHOOL ORGANISATION. TIME-TABLES.

*"Of organisation this the beauty is;—let first
Be said what ought to be said first, the rest
For the nonce defer."*

HORACE.

Let us suppose that a teacher has made her maiden appearance in a country school and finds some two score or fifty pupils facing her. What is she to do? What ought she to have done?

A
AFTERNOON.

AFTERNOON.	SCHOLARS IN 1ST READER.	2ND READER.
1° to 1° 30'	ALL WRITE. One Scholar writing on the Blackboard.	Do Sums in Part 1.
1° 30' to 1° 45'	Read.	Sums on the Blackboard.
1° 45' to 2°	Copy the sums from the Blackboard on their slates.	Read simultaneously sometimes use Second Reader.
2° to 2° 15'	Read to Monitors.	times the Third day repeat Recitation.
2° 15' to 2° 30'	Print their Reading Lesson or write their names on their slates.	Sums.
2° 30' to 2° 45'	DICTATION TO ALL. The smaller Scholars write History, &c., or a sentence for the Grammar.	th
3° to 3° 30'	Read for a few minutes.	Draw from Wall Drawing Cards the Blackboard, or draw a map of the Geography.
3° 30' to 4°	Be dismissed, or draw, or play outside.	Geography, or Open Air lessons for a few minutes.
		Prayers—Dismissal—Herald.

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HORACE.

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PROGRAMME OF DAILY STUDY FOR AN

MORNING.	SCHOLARS IN 1ST READER.	2ND READER.	3RD READER.
9° to 9° 30'.....	{ Opening Exercises. Bible Reading, Prayer, &c. Prepare for the Algebra, Bookkeeping or French Class, if any. One		
9° 30' to 9° 45'....	Read and Spell.	Do sums from their Arithmetics going done into an Exercise Book. A s Text Book.	
9° 45' to 10°.....	Do sums or copy ciphers on their slates	Reading and spelling lesson	Do Sums, Book.
10° to 10° 15'.....	Read to Monitor or some advanced pupil.	Do Sums.	Read and
10° 15' to 10° 30'..	Read to Monitor or some advanced pupil.	Continue to do Sums.	Do Sums.
10° 30' to 10° 35'...	Teacher examines sums done. Some Teachers give one (1) mark (3) marks for every sum copied into the Exercise Book and re		
10° 35' to 10° 50'...	Copy their Reading Lesson carefully on their slates, while the 5th		
RECESS AND SINGING.—In some schools the Boys go out for five min Boys sing.			
11° to 11° 30'.....	Read for a few minutes.	Learn tables and copy some of them on	
11° 30' to 12°.....	Tables—Mental Arithmetic—Some add up an addition sum on the Tell" principle. A long addition sum might be kept perman every day.		

STUDY FOR AN ELEMENTARY SCHOOL.

A
MORNING.

1ST READER.	3RD READER.	4TH READER.	5TH READER.
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ayer, &c. Prepare Lessons. Sometimes there is time for a little Parsing or
h Class, if any. One Monday the Scholars bring a letter; the next a Composition.

their Arithmetics going steadily thro' their text book. Some copy each sum when
Exercise Book. A sum may be put on the blackboard for those who have no

lling lesson Do Sums, as above, on their Slates, some entering them into an Exercise
Book.

Read and Spell.

Continue to do Sums.

Do Sums or Algebra, &c.

Sums.

Do Sums.

Read and Spell.

Do Sums or Book-
keeping, &c.

thers give one (1) mark (or "good point") for every sum done on the slate, and three
Exercise Book and record these marks in a journal kept for the purpose.

ir slates, while the 5th Class is Reading and Spelling.

Read and Spell.

boys go out for five minutes while the Girls sing, and then the Girls go out when the

copy some of them on their Slates.

Grammar and Parsing.

n addition sum on the blackboard with the Teacher or a Monitor on the "Touch and
ght be kept permanently on the blackboard, and one or two lines of it changed

A
AFTERNOON.

AFTERNOON.	SCHOLARS IN 1ST READER.	2ND READER.
1° to 1° 30'.....	ALL WRITE. One Scholar writing on the Blackboard; T	
1° 30' to 1° 45'	Read.	Do Sums in Practical Ar Sums on the Blackboard d
1° 45' to 2°.....	Copy the sums from the Blackboard on their slates.	Read simultaneously, sometimes using the Second Reader, some- times the Third. On Fri- day repeat Recitations.
2° to 2° 15'.....	Read to Monitors.	Sums.
2° 15' to 2° 30'.....	<i>Print</i> their Reading Les- Lesson or write their names on their slates.	Do Sums on their Slates a
2° 30' to 2° 45'.....	DICTATION TO ALL. The smaller Scholars writing the s History, &c., or a sentence for the Grammar Class to	
RECESS AND S		
3° to 3° 30'.....	Read for a few minutes.	Draw from Walter Smith's Drawing Cards, or from the Blackboard or Read- er, or draw a map from the Geography.
3° 30' to 4°.....	Be dismissed, or draw, or play outside	Geography, or Object Les- sons for a few minutes.

Prayers—Dismissal—Hour Turned

Prayers—Dismissal—Hear Turned (t)

2ND READER.	3RD READER.	4TH READER.	5TH READER.
<p>on the Blackboard; Teacher going round from Scholar to Scholar to see how each is doing.</p> <p>ums in Practical Arithmetic from the Blackboard. The Teacher should have set these</p> <p>as on the Blackboard during the Dinner hour or the Writing Lesson.</p> <p>simultaneously, Continue to do the Sums set on the Blackboard.</p> <p>etimes using the</p> <p>ond Reader, some-</p> <p>es the Third. On Fri-</p> <p>repeat Recitations.</p>	<p>Read simultaneously, sometimes using the Third</p> <p>Reader, sometimes the Fourth. On Friday do</p> <p>Recitations learnt at home.</p>		<p>Continue to do Sums.</p> <p>Read; on Friday Recite.</p>
<p>ums on their Slates as before.</p>			

Scholars writing the smaller words. The Teacher should often dictate questions in Geography, the Grammar Class to parse on their slates between half-past 3° and 4°.

RECESS AND SINGING.

<p>from Walter Smith's</p> <p>ving Cards, or from</p> <p>Blackboard or Read-</p> <p>draw a map from</p> <p>Geography.</p> <p>phy, or Object Les-</p> <p>for a few minutes.</p>	<p>Geography.</p> <p>History; or write answers to the questions set them in the Dictation Lesson; or Draw.</p>
<p>ssal—Hear Turned (that is “ Rejected ”) Lessons, if any.</p>	

1 st .	3RD READER.	4TH READER.	5TH READER.
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Blackboard; Teacher going round from Scholar to Scholar to see how each is doing. Practical Arithmetic from the Blackboard. The Teacher should have set these on the Blackboard during the Dinner hour or the Writing Lesson.

Continuously, Continue to do the Sums set on the Blackboard.
 Sing the
 or, some-
 l. On Fri-
 itations.

Read simultaneously, sometimes using the Third Reader, sometimes the Fourth. On Friday do Recitations learnt at home.

Continue to do Sums.

on their Slates as before.

Read; on Friday Recite.

Writing the smaller words. The Teacher should often dictate questions in Geography, near Class to parse on their slates between half-past 3rd and 4th.

RECESS AND SINGING.

er Smith's
 s, or from
 l or Read-
 map from

Geography.

bject Les-
 minutes.

History; or write answers to the questions set them in the Dictation Lesson; or Draw.

or Turned (that is "Rejected") Lessons, if any.

WHERE THERE ARE NO SCHOLARS IN THE FIRST R

MORNING.	LOWEST READING CLASS.	3RD READING CL
9° to 9° 30'.....	Opening Exercises. If there be time, to	
9° 30' to 9° 50'.....	Read and Spell.	D
9° 50' to 10° 10'....	Do Sums.	Read and Spell.
10° 10' to 10° 30'...		Do Sums.
10° 30' to 10° 50'...		Copy the Reading Lesson c.
	BOYS SING.	I
11° to 11° 30'.....	Learn Tables or copy them on their Slates.	
11° 30' to 12°.....	Tables — Mental Arith	
AFTERNOON.		
1° to 1° 30'.....		
1° 30' to 1° 45'.....	Read: on Friday Recite.	Do S
1° 45' to 2°.....	Sums.	Read; on Friday
2° to 2° 15'.....	Continue to do Sums from the Blackboard.	
2° 15' to 2° 30'.....	Copy their Reading Lesson carefu	
2° 30' to 2° 45'.....		
	SINGING, &C.	
3° to 3° 30'.....	Draw or Draw Maps.	
3° 30' to 4°.....	Geography orally for a few minutes. Draw.	
	Prayers.	I

TIME TABLE

WHERE, AS I RECOMMEND, THE FOLLOWING

MORNING.	1ST READER.	2ND READER.	
9° to 9° 30'	Opening Exercises. Algebra, Euclid or Parsing, if there be		
9° 30' to 9° 50'	Read and Spell, and Spell from Readers.		Do Sums in order from their A
9° 50' to 10° 10'	Do Sums or copy Ciphers.	Read and Spell.	Contin
10° 10' to 10° 30'	Read to Monitor.	Do Sums.	Read a
10° 30' to 10° 50'	Teacher examines the Sums done. Some Teachers give "go" Copy their Reading Lesson carefully on their slates at their		
RECESS AND SINGING			
11° to 11° 30'	Read for a few minutes. Learn Tables or copy them onto the		
11° 30' to 12°	Tables and Mental Arithmetic. Some do an addition Sum in		
AFTERNOON.			
1° to 1° 30'	WRITE ONE AND ALL. Smaller Scholars writing with lead p		
1° 30' to 1° 45'	Read simultaneously.	Do Sums set them by the Teacher	
1° 45' to 2°	Copy the Sums set on the Blackboard.	Read; on Friday Recita-	Cont
2° to 2° 15'	Read to Monitors.	Do Sums.	Reac
2° 15' to 2° 30'	Write their names on their Slates.	Write their Reading Lesson on their	
2° 30' to 2° 50'	Dictation to <i>all</i> ; the smaller Scholars writing the smaller		
RECESS AND SINGING OR CALU			
3° to 3° 30'	Read for a few minutes.	Draw, or Draw Maps.	Geog
3° 30' to 4°	Draw or be dismissed.	Geography orally.	Histo
Prayers — Dismissal — Hear Rejected			

TIME TABLE.

B

RECOMMEND, THE FOURTH READER IS NOT USED.

1ST READER.	3RD READER.	5TH READER.
or Parsing, if there be time. Scholars prepare Lessons for the day. in order from their Arithmetics on Slate, or Slate and Exercise Book.		
Spell.	Continue to do Sums as above. Read and Spell.	Sums or Algebra.
The Teachers give "good marks" for the work done, and records these marks in a book. on their slates at their seats.		
		Read and Spell.
RECESS AND SINGING.		
or copy them onto their Slates.		
do an addition Sum in Class with Teacher or Monitor.		
Grammar.		
s writing with lead pencil till old enough to use a pen. them by the Teacher on the Blackboard.		
Friday Recita-	Continue to do Sums.	
	Read; on Friday Recite.	Sums, Algebra, &c.
Reading Lesson on their Slates.		Read; on Friday recite.
s writing the smaller words.		
AND SINGING OR CALISTHENICS.		
w Maps.	Geography.	
rally.	History.	
nissal — Hear Rejected Lessons.		

WHERE THERE ARE NO SCHOLARS IN THE FIRST READER, THE

MORNING.	LOWEST READING CLASS.	3RD READING CLASS.
9° to 9° 30'	Opening Exercises. If there be time, take the Alphabet.	
9° 30' to 9° 50'	Read and Spell.	Do Sums from the Blackboard.
9° 50' to 10° 10'	Do Sums.	Read and Spell.
10° 10' to 10° 30'		Do Sums.
10° 30' to 10° 50'		Copy the Reading Lesson carefully on their Slates.
	BOYS SING.	RECESS.
11° to 11° 30'	Learn Tables or copy them on their Slates.	
11° 30' to 12°		Tables — Mental Arithmetic — Addition.
AFTERNOON.		
1° to 1° 30'		ALL WRITING.
1° 30' to 1° 45'	Read; on Friday Recite.	Do Sums set from the Blackboard.
1° 45' to 2°	Sums.	Read; on Friday Recite.
2° to 2° 15'	Continue to do Sums from the Blackboard.	Read and Spell.
2° 15' to 2° 30'		Copy their Reading Lesson carefully onto their Slates.
2° 30' to 2° 45'		DICTATION.
	SINGING, &C.	RECESS.
3° to 3° 30'	Draw or Draw Maps.	
3° 30' to 4°	Geography orally for a few minutes. Draw.	
	Prayers.	Dismissal

TIME TABLE.

FIRST READER, THE SCHOOL SHOULD THEN HAVE FOUR READING CLASSES.

READING CLASS.	2ND READING CLASS.	HIGHEST READING CLASS.
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time, take the Algebra Class, if any.

Do Sums from their Arithmetics.

l Spell.

Continue to do Sums.

Read and Spell.

Do Sums or Algebra.

Lesson carefully on their Slates.

Read and Spell.

RECESS.

GIRLS SING.

ir Slates.

Grammar.

tal Arithmetic — Addition Sum — On Friday add up Marks.

ALL WRITE.

Do Sums set them on the Blackboard by the Teacher.

on Friday Recite.

Continue to do Sums.

kboard.

Read.

Sums.

on carefully onto their Slates.

Read.

DICTATION.

RECESS.

CALISTHENICS, &c.

s.

Geography.

. Draw.

History of England and Canada alternately.

Dismissal

Turned Lessons.

TIME TABLE.

IN ORDER, THE SCHOOL SHOULD THEN HAVE FOUR READING CLASSES.

1st READING CLASS.	2ND READING CLASS.	HIGHEST READING CLASS.
ekbont		
naetienke the Algebra Class, if any.		
nekbogSums from their Arithmetics.		
eous	Continue to do Sums.	
ing	Read and Spell.	Do Sums or Algebra.
r, songrefully on their Slates.		Read and Spell.
l. On F		
itatorRECESS.	Girls Sing.	
	Grammar.	
metie — Addition Sum — On Friday add up Marks.		
air Sla		
ALL WRITE.		
riting	ums set them on the Blackboard by the Teacher.	
nar Cl	Recite.	Continue to do Sums.
CESS.	Read.	Sums.
—lly onto their Slates.		Read.
erSmi	DICTATION.	
s, or f		
l or R	RECESS.	CALISTHENICS, &c.
map f		
	Geography.	
bject	History of England and Canada alternately.	
minut	Dismissal	Turned Lessons.
ir Tur		

CLASS.

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TIME TABLE.

WHERE THE TEACHER FINDS IT BEST TO GIVE TWENTY OR TWENTY

MORNING.

1ST READER.

2ND READER.

3RD READER.

9° to 9° 30'.....	Opening Exercises. Euclid. Algebra, Parsing, if time. Scholastic.		
9° 30' to 10°.....	Read a few minutes, then do slate work.	Read and Spell.	D
10° to 10° 30'.....	Read a few minutes, then do something at their seats.	Sums.	Read and S
10° 30' to 10° 45'...	Read to Monitor.	Teacher examines Sums done and m	

RECESS.

11° to 11° 30'.....	Read a few minutes.	Learn Tables, &c.	
11° 30' to 12°.....	Tables.	Mental Arithmetic.	Addition Su

AFTERNOON.

1° to 1° 30'.....		ALL WRITE.	
1° 30' to 2°.....	Read a few minutes, then write names on Slates.	Sums from Text Book and Blackboard	
2° to 2° 30'.....	Read to Monitor or Teacher.	Continue to do Sums or copy Reading their Slates.	
2° 30' to 2° 50'.....		DICTATION TO ALL.	

RECESS.

3° to 3° 30'.....	Read for a few minutes.	Draw, or draw maps.	
3° 30' to 4°.....	Be dismissed or draw.	Geography orally for a few minutes.	

TIME TABLE.

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E TWENTY OR TWENTY-FIVE MINUTES TO THE READING CLASSES.

1ST READER.	3RD READER.	4TH READER.	5TH READER.
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During, if time. Scholars prepare the Lessons for the Day.

Do some Sums from their Text Books on Blackboard.

Read and Spell.

Sums.

Teacher does Sums done and marks them according to excellence.

RECESS.

1ST READER.	3RD READER.	4TH READER.	5TH READER.
Grammar.			
Arithmetic.	Addition Sum on Blackboard.		

ALL WRITE.

1ST READER.	3RD READER.	4TH READER.	5TH READER.
Book and Blackboard alternately.	Read and Spell.		Sums.

1ST READER.	3RD READER.	4TH READER.	5TH READER.
Sums or copy Reading Lessons on	Sums.		Read and Spell.

LECTURE TO ALL.

RECESS.

1ST READER.	3RD READER.	4TH READER.	5TH READER.
Maps.	Geography.		
for a few minutes.	History.		

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She ought to have visited the school-house a fortnight before, if possible, to see if the building was in good order, or to have written to the Secretary-Treasurer and asked him to find out. What she wants done, either in the way of repairs or additional school appliances, she had better try and secure at first, for people will mostly do more for a strange teacher than for one they know. "Omne ignotum pro mirifico." She should also have gone to the school-house just before the opening day and *seen* that it is well swept, provided with firewood, chalk for the black-board, &c., and that her desk is equipped with Bible, pens, pencils, ink and paper and school register. She should, finally, have been at her desk some time before beginning work and made a friendly acquaintance with several of her scholars, one by one, as they came in, finding out their names and attainments, and giving them each a kindly word to win their respect and sympathy from the first.

Punctually to the minute, school should be opened with psalm or prayer. This, apart from its other recommendations, has a marked effect on discipline.

We would advise the teacher to have with her a sheet of paper ruled in three columns, which must be headed "*Class i.*," "*Class ii.*," "*Class iii.*," respectively. This sheet of paper should be ample in size. In drawing up all rough copies of tabular statements indeed, it is well to use plenty of paper, ruling it in ample columns, entering the names, &c., very small in pencil, so as to have plenty of room to make changes, exchanges and corrections, and write over the final result in ink before making a fair copy.

Having three columns on the roll-call sheet, the teacher can say, "Let those scholars come to my desk who are in the first reader or who do not know their alphabet." She must then put down their names in the *Class i. Column*, assigning them places towards the top or bottom of the column, according to their seeming proficiency. Those in the Second and Third

Readers can be entered under *Class ii.*, and those in higher Readers under *Class iii.*

One of these classes can be "called up," and the rest put down to an Arithmetic Examination, the examples being set by the teacher on the black-board and worked by the scholars on their slates. Then the other two classes can come up in rotation, the requisite sub-divisions made in them, and the names of those scholars who are to study Geography, History, &c., entered on the class lists after they have been briefly examined. By this course the teacher will, in the course of the morning, have passed each scholar under individual examination. Of its results she must make full and permanent record to use in gauging subsequent progress.

A new teacher will find it more easy to learn the names of her scholars, if the classes are entered alphabetically in the register, and the scholars made, at first, to stand in alphabetical order in class.

To have as few classes as possible in the different subjects gives the teacher less trouble and the scholars more interest in their work, and more instruction. For a careful teacher can so manage her questions as to keep alive the attention of a large class of very different ages and attainments. If we were forced to have two classes in Geography or History, we should often call both up together and make each hear the questions and explanations given to the other. In these subjects, by the way, it is often very advantageous to make the scholars in turn ask questions of one another, taking places in class the while.

A main point in organizing a school is from the first minute you declare school open to require perfect silence till you formally give the scholars a set number of minutes to communicate with one another. "C'est le premier pas qui coute." "Well-begun is half done." From the very first minute the teacher must resolve to be perfect master in the school *at all hazards*. If any boy on the first day show any tendency to wil-

fully break school-regulations, the teacher should kindly but firmly request him to wait behind after school is dismissed for a private interview, and on a repetition of the offence send him out of the room till that time arrives. The teacher should hold the power of extreme punishment in reserve as long as possible. Undue familiarity with it only tends to breed contempt. The eye is, after all, the main instrument of discipline. As in a good portrait, it should ever be quietly omnipresent. A teacher should get into the habit of "catching" his pupils' eyes with his own and nipping all misdoing in the bud by a glance. He must practise looking his scholars in the face. These are most important points, and must be sedulously and persistently acted upon.

"When a thing is once discovered almost any one can improve on it," said Aristotle. We will end this chapter with some time-tables for teachers to improve upon as special circumstances suggest. Before doing so we will enumerate the salient points in Moseley's famous tripartite system of school organisation.

His great claim is that each scholar should have as much as possible an equal share of the attention and time of the principal of the school. The principal may be assumed to be the master-mind in the institution, and the smaller pupils (so often neglected) derive most benefit from contact with that master-mind. The principal also, by watching it from the first, will learn much in a child's character which will be disguised from him in the highest classes of the school, and will be able to correct many tendencies which would after a time become incorrigible.

Moseley divides each great division of the school day into three (3) sub-divisions; the whole school must then be divided into three classes, and (assuming that the school has a principal, an under-teacher and monitors) each class is to appear before the monitors, the under-teacher and the principal in rotation during one of these tripartite divisions of time. The

monitors are to superintend the writing of copies and exercises, slate Arithmetic, drawing, committing to memory and even the teaching of "mechanical reading" to small classes of not more than ten members in each. The mistress is mainly to teach reading. The business of the principal of the school is to give oral instruction, but he will also hear lessons, and review and examine work done before the monitors and the mistress, and from time to time he will pause and require the children to write down their recollection of the lessons he has been giving. Moseley thinks that a school of 150 children can thus be well administered by two teachers and three or four unpaid pupil teachers or monitors.

In making out a time-table the important thing is to assign the right amount of time to the different subjects. The standard to be aimed at is thought, by good authorities, to be somewhat as follows :

We will divide children into three grades of the average ages of nine, twelve and fifteen years respectively. We will call them, for convenience, grades one, two and three, grade one being the youngest.

Assume 5 school-days to the week. Then allow 5 hours schooling a day for grade i.; 5 hours and 40 minutes for grade ii.; 6 hours for grade iii.

Out of this, allow, each day, 40 minutes for opening and closing school, intermissions, addresses, &c.; 20 minutes a day each for (1) Singing and Drawing, (2) Geography and Object Lessons, and (3) Scripture History and religious instruction; in all 100 minutes.

This leaves us 200 minutes a day for grade i., which may be thus spent:—Reading and preparing reading lesson 60 minutes; Writing on copy-book and slate 40 minutes; Spelling 40 minutes; Miscellaneous Exercises 20 minutes; Arithmetic and Tables 40 minutes.

For Grade ii. we had originally 5 school-days of 340 minutes each. Of these 340 minutes we have devoted 100 in all to æsthetics, morals, Natural Science, &c. This leaves us 1,200 minutes a week. Take for Read-

ing, 200; Writing, 100; Spelling, 140; Grammar, Composition, French and Latin, 400; Mathematics, 300; History, 60.

For Grade iii. we had originally 1,800 minutes a week. From these we subtracted 500 minutes for æsthetics, morals, &c., as before. This leaves 1,300 minutes. Take for Reading, 100; Writing, 100; Spelling, 100; Languages, &c., 500; Mathematics, 400; History, 100.

The proportions given above may be better understood if the week be divided into lesson periods of twenty minutes each.

Then deducting for intermissions, &c., Grade i. will have 65 such periods a week; Grade ii., 75; Grade iii., 80.

Of these, Grade i. (average age nine years) gives to Reading, 15; Writing, 10; Spelling, 10; Miscellaneous Exercises, 5; Arithmetic, 10; Object Lessons, 5; Morals, 5; Singing, &c., 5;—in all 65.

Grade ii. will have for Reading, 10; Writing, 5; Spelling, 7; Languages, 20; Arithmetic and Book-keeping, 15; History, 3; Geography, 5; Morals, 5; Singing, 5;—in all 75.

Grade iii. will have for Reading, Writing, Spelling, History, Science, Morals, Æsthetics, 5 each; for Languages, 25; for Mathematics, 20;—in all 80 lesson periods.

In regard to the quotation at the head of this chapter it may be observed that in our Time-Tables on the last two pages we have paid special attention to the order in which we recommend the different subjects to be taught. We have put the higher Mathematics and new Arithmetic first in the morning, for the intellect is the brightest then, and should be so when applied to these subjects. Reading aloud comes last in the morning, for it *necessitates* a rousing of the attention. "Back Sums" come at the end of the day, for we have found that though the memory flags then, this work can then be done well.

CHAPTER XIX.

DUTIES OF SCHOOL COMMISSIONERS AND THEIR SECRETARY—TREASURERS.

"Therefore, for the love of God appoint teachers and schoolmasters, ye that have the charge of youth, and give them stipends worthy of their pains, and let them teach, above all things, the Word of God."

BISHOP LATIMER.

The duties of a School Commissioner are two-fold; those laid on him by the law of the land, and those laid on him by the laws of courtesy and good feeling.

With regard to the former the first thing he should do after his appointment is to write to the Superintendent of Education for a copy of the School Act. By the courtesy of the Department he will receive one gratis, and he should at once master its contents.

He would do well also to look over the recent minutes of proceedings of his Board, mark their more important enactments, provide himself with a map of the municipality, showing the limits of the school districts and the position of the school-house in each, and satisfy himself that the bond originally given by the Secretary-Treasurer is in due form, and that the sureties to it are solvent.

The School Act will tell the School Commissioner what he has to *know*. We will give a brief summary of what it gives him to *do*, calling especial attention to those points which are generally neglected or seem to require explanation.

THE DUTY OF VISITING SCHOOLS.

The duty most generally neglected is that of visiting the schools. The law enjoins that each Board of Commissioners shall appoint two at least from among themselves to visit all their schools twice a year or oftener. The duty of visiting schools is also laid

upon others, and amongst them the clergy. The Protestant clergy, we believe, universally neglect it. It is no excuse to a commissioner who fails in the duty, that his minister alike breaks this law of the land. And it is no excuse to the clergyman (to whom the lambs of his flock should be an especial care) that the commissioner can be fined (see chap. 15, sec. 125) for not doing this duty, while his Spiritual Guide and Exemplar can not.

The visits mentioned above encourage the efficient, and are some check on the careless, teacher. The tendency of teachers is to push their scholars on into readers which are too hard for them, in order to please the parents. This pernicious practice is best checked by the visits of commissioners. A backward and ignorant neighbourhood yields little sympathy to thorough and strict teachers. These then need reminding that it is the School Commissioners who engage them, not the parents, and that it is the more enlightened unprejudiced judgment of the Board, and not the predilections of parents, that they have to satisfy.

SCHOOL MANAGERS.

In some places, indeed, the engagement of the "school ma'am" is left to a School Manager living near the school. This contravenes the Act. The school-house (with its contents and requirements) alone forms the province of the School Manager. The very first and foremost duty of Commissioners, mentioned in the Act, is to engage teachers. A Manager sometimes engages a teacher for a longer term than there are funds to pay for, and is always open to charges of nepotism and favouritism. It is, moreover, as Mr. Inspector McLaughlin suggests in his Report for 1876, very desirable that different salaries be given to the different schools in a municipality, and the more excellent teachers promoted to the better-paid schools.

This is a strong stimulus to teachers to try to excel. It opens out a vista of possible advancement before them, and tends to keep the more ambitious and spirited of them in a municipality till they have taught the best school in it.

School Managers indeed should be universally appointed. A teacher should always have some one at hand to whom she can apply for advice and support if any emergency arises, or if repairs or fuel are wanted in the school house. She needs also some one to show her a little hospitality or social politeness. Courtesy, indeed, and good feeling, lay this pleasant duty upon School Commissioners and parents as well as on Managers, though they seem mostly to forget it.

If there be more than one School Manager, the second should be appointed to act only in case of absence or neglect on the part of the first. If anything is the business of two men equally, they act generally as if it was the business of neither.

ENGAGEMENT OF TEACHERS.

Another obligation suggested by the Act is to be very slow to change teachers. This is the spirit of several provisions of the law. All engagements of a teacher it evidently wishes to be permanent. The Act requires two months' notice to terminate them, even at the end of that year for which only, the written agreement seems, at first sight, binding. No compact tending to evade this two months' notice has any legal force. A circular issued to School Commissioners by the Department of Education in 1857 explains that an attempt to reduce the teacher's salary is equivalent to an attempt at dismissal, and is not legal without the due notice given two months before the end of the engagement. Nor must School Commissioners remove a teacher without mature deliberation at a meeting specially called for the purpose, and then only for incapacity, neglect of duty, insubordination or misconduct.

Every time a child goes to a new teacher it is thrown back a month at least in its studies. Instead of lightly changing teachers, Commissioners might well offer (as is done in Montreal) a yearly increase of salary to those who stay in the same municipality.

COMPULSORY EDUCATION.

After all, the main moral obligation of School Commissioners is one not named in the Act. It is to see that no child in their municipality is growing up without education. Neglect of this encourages the commission of crime. Almost all our worst criminals can neither read nor write. By increasing the spread of general education we diminish the number of the inmates of our jails and penitentiaries. At every meeting the Commissioners should enquire if there are any children within their limits who are growing up without instruction, that is without the means of living in a way worthy of the name of life, for a man may well date his existence from the time he can read and write.

A list of children who go to no school should be made out and read at each meeting, and every conceivable means anxiously thought over to try and reduce it to a minimum or a nonentity.

Monthly fees were specially designed to force children into school. It was thought that if a parent paid for a particular child's schooling, he would take care that the child got it. Now, if the taxes are reduced and these monthly fees raised, careless parents can be told that the Commissioners will force them to pay these high fees if they enrich themselves by keeping their children at home to work. If they send their children to school, especially if they send them long distances, the law may be stretched to excuse the payment of fees on the plea of poverty, where this plea exists. School fees may thus be used to have the effect of modified compulsion.

SCHOOL TAXES.

But neither poverty nor distance from school is any excuse for the non-payment of school taxes. It is the duty of the Commissioners to cause them to be levied. By neglecting this duty they are liable to be fined, and what is worse, they break the law.

The school tax is to be fixed and laid in May or June, and as the school year begins in July, it seems the intention of the Act that funds should be collected in advance of the time when the schools open, so that Secretary-Treasurers shall have money in hand to pay the teachers' salaries on demand. It is evidently fair to teachers that their salaries should be paid at the end of each month, and no municipality can be said to be administered to perfection where this is not done.

It is also much better for the taxed that they pay their school rates at once, for they lie as a first mortgage on each farm, bearing interest and not requiring registration, and we have special information from the Superintendent of Public Instruction that arrears may be collected for thirty years back.

There is no need to sue for school taxes. Twenty days after the Secretary-Treasurer has posted general public notice that the collection roll lies in his office, he may serve special personal notices demanding payment, and charge for each the sum established by the local Council for similar notices. This sum ranges between twenty-five and fifty cents. Fifteen days after serving personal notice, the Secretary-Treasurer has to get the Chairman of the School Commissioners to sign a distress warrant, and give notice of sale, which may take place on the ninth day after distress. All this assumes that the taxes remain unpaid.

There is no option in this matter. The law says that the Secretary-Treasurer "shall" do it. He must carry out the law or he breaks the law.

POSITION OF SCHOOL-HOUSE.

But though the School Commissioners may not excuse a property-holder from paying taxes because of his distance from a school-house (a disadvantage of which he ought to have taken note and account in purchasing his property), though they may select any site they please for a school-house (on paying for it by arbitration)—yet, if the position of the place where school is to be taught is not fixed with equal fairness to all, an appeal will lie to the Superintendent. The school-house need not (as is popularly assumed) necessarily stand in or near the middle of the district which might be a mountain or a swamp. The school-house should stand where it suits the majority of the inhabitants; but where wrong seems thereby done to any minority of families, the Commissioners may hire or borrow a room in *their* neighbourhood to keep school in for a fair proportion of the year.

SCHOOL DISTRICTS.

Excessive sub-division of districts is a prevalent evil. School-houses should not be less than four or five miles apart. We have known boys of nine or ten walk six miles to school and six back, and not suffer from it. This was in England. Though the climate is different, children can surely walk two miles here. There may not be more than one school district in a municipality which contains less than twenty children. But if there be two outlying settlements, each claiming the privilege of being made a separate school district, the Commissioners may give them this privilege in turn. For Commissioners have full power to alter the limits of school districts as they please, subject, of course, to appeal to the Superintendent of Education.

Children have often to attend school in a neighbouring municipality, there being no school-house within reasonable distance in their own. In such

cases parents may petition the Commissioners to hand over their taxes and school fees for the benefit of the school which their children attend. In case of refusal, parents may appeal to the Superintendent of Education, Quebec, who will advise what he thinks equitable in the case.

DIVISION OF SCHOOL FUNDS.

In one particular the School Act is commonly broken, and, seemingly, with a beneficial effect, at times, on peace and quietness. The law provides that the total amount of money accruing to any municipality in any given year, shall be divided among the several School Districts, in exact proportion to the number of children of school age in each District. In country parts people seem to doubt the ability and impartiality of their Secretary-Treasurer in working out such a difficult sum in proportion. They fear, too, that it may at any time result in some of their money going to help their neighbours—a possibility against which they have a fast rooted prejudice. They prefer that the money raised in each district shall be entirely used for the benefit of that district. There are deep reasons—too deep for many people to arrive at, and opposed, indeed, to their natural predilections,—for the plan of dividing the money laid down in the Act. It seems, at first blush, indeed, to favour unfairly the most popular and thickly settled portions of the municipality. It seems a hardship that any district should have a better supported school than our own, especially if our money helps in its support. It is, however, not really a hardship, but a boon to us that there should be one such school at least in each municipality.

Meanwhile it is the obvious duty of the Boards of Commissioners to carry out the law. If they think the law unwise they should try and get it altered. But till it is altered they must obey it.

The posts of School Commissioner and Secretary-Treasurer are not profitable ones. A healthy public opinion would regard them as the most honourable offices in the Dominion. The Act establishing them has realised one of the dreams of Plato's most dreamy master-piece—the Republic. He says that people should choose the best men to govern them and fine them if they refuse. He says elsewhere that the good must be maligned and ill-thought of, and adds, strangely enough, (writing, as he did, nearly four centuries before Christ) that “the Just One must be scourged, tortured, and finally *crucified* that men may know that they ought to *be*, and not merely *to be thought* just.” His general idea applies to a School Commissioner. He gives valuable time without recompense. He gets sometimes nothing but ill-will and evil imputations, for his reward. Men speak evil of him for doing his duty. Either then he is doubly blessed or the beatitudes are false. Forcing people, often against their will, to pay for well equipped school-houses and well-remunerated teachers, (for in the long run the excellence of the teachers at any given school will depend on the salary paid them), visiting the schools when he could be earning money at his business, attending board meetings over bad roads, on many a dark night, the Christian School Commissioner can show that the sense of duty is no unpractical conception, and faith no ineffectual unreality. He and his confreres are the real “power behind the throne.” For the future of the country depends on the education of its rising generation; that education depends on its schools; and the schools depend on the School Commissioners.

THE SECRETARY-TREASURER.

The Secretary-Treasurer, too, unless his labours are smoothed for him by the School Inspector, is miserably under-paid, and often, to our knowledge, strangely

unappreciated and traduced. We will try and point out some means of materially lightening his labour and his troubles.

Firstly, by a little management it will be found that the yearly meeting of Commissioners to audit the Secretary-Treasurer's accounts, and the yearly meeting of rate payers to receive a statement of them, as well as the meeting for the election of new School Commissioners can be held on the same day, the first Monday in July. This will save much time and trouble.

Secondly, we would advise that the abstract of his accounts which he is to put yearly on the church door, should be as full and complete as possible. The Secretary-Treasurer may think the provision of the law which requires that an abstract of his accounts should be put up, is one which it is a great hardship to him to carry out. On the contrary, it will be found to be a means of conducing very much to his general advantage. The confidence of those he has to deal with will be at once a pride and a pleasure which few things else can give. Many a poor man is ignorant enough to think it a hardship that his money should be forcibly taken from him to pay for the general education of his district, but he will feel it ten times more hard if he has the slightest suspicion that his money is being mis-used. And men living lonely lives and not accustomed to handle large sums of money are strangely prone to allow such suspicions to have access to their minds, and if they once allow them access they are apt to brood over them till they assume the shape of certainties. Now, if an abstract of accounts is posted every year in a public place the men who are too ignorant to understand it will be the last to say so, and without it these very men would be the most likely to entertain suspicion.

The following is suggested for the general form in which the abstract of accounts may be drawn up:

SECRETARY-TREASURER IN ACCOUNT WITH THE SCHOOL MUNICIPALITY OF _____

Dr. To balance from last year.....\$
 " To assessment of _____ per cent on a
 total valuation roll of \$.....
 " To arrears of taxes paid this year.....
 " To special assessment for school houses,
 &c. (if any).....

\$

Cr. By District No. 1 salary.....\$
 " By District No. 1 expenses.....
 " By District No. 2 salary.....
 " By District No. 2 expenses.....
 (And so with the other Districts.)
 " By arrears unpaid on assessments of
 current year (giving the names in
 arrears, with amounts, in a foot note)
 " By payments on account of special as-
 sessment (if any).....
 " By balance in hand

\$

The books he should keep are four—a cash book, a ledger, a receipt book, and a book of personal notices to pay taxes, called “Form 15” in the School Act. The last two should have “stubs” to the left of each page.

In the *CASH BOOK* should be entered daily all receipts and disbursements. The No. of the District concerned should be noted with every item, and also whether any money paid in, be for taxes or fees. The collection of fees, by the way, should not be left to the school teachers. This is contrary to the spirit of the Act, and causes in the end more trouble than it saves.

In posting to *THE LEDGER*, each item must be entered twice; firstly, to the man,—and secondly, to the district it concerns. Each inhabitant of the municipality should be charged with his assessment and school fees for the coming year directly they are levied, which is generally in the month of June. It may be inconvenient to do this then, at the right time, but it will be found in the end much more inconvenient *not* to do things at the right time.

A *RECEIPT BOOK* should always be in the country Secretary-Treasurer's pocket when he is away from home. It will answer two ends if thus worded :

“—————187

“ Received of———, ———dollars for———for
 “ the School Municipality of so-and-so.
 “ \$—————.”

When he pays a man money he should fill in one of these receipts, make the payee sign it, and *keep* the receipt *in the book*. When he receives money he should fill in and sign the receipt himself, tear it *out of the book* and hand it to the payer, entering name, date and amount on the “stub.” To give a printed receipt inspires confidence. If the Secretary authorises his wife or any one to transact business at his house in

his absence, he can keep a duplicate receipt book there, exactly similar to the one in his pocket.

October should be the very latest month in which a rate payer should be allowed to pay the tax levied in June. The bulk of the taxes should be collected in July or August. After once carrying out the law in issuing and charging for the notices (those, we mean, in the "form 15,") the Secretary will, we are assured, find the taxes paid in promptly enough in succeeding years. The Act was framed to save the Secretary-Treasurer all possible trouble, and he is wrong not to avail himself of all the requirements in it which have this aim and tendency.

The labour of taking the census will be more than halved eventually if at first slightly increased. The name of every parent in the municipality should be entered in a book small enough to go into the pocket. Under the parent's name and on a separate line should be the name and exact age of every one of his children, which the Secretary can enter betimes as he meets each man. With a few occasional corrections and additions this book will save the necessity of going round to each house every year, and will check the practise some parents have of deceiving the Secretary-Treasurer as to the number of children they have of school age.

To set about things thoroughly saves trouble in the end.

The following is suggested as a form of bond to be used on the appointment of a Secretary-Treasurer. When signed it must be registered without delay.

"Whereas———of———in the County of
"———, in the district of———, following the
"occupation of———, has been appointed
"Secretary-Treasurer to the School Commis-
"sioners of the School Municipality of———
"by virtue of which appointment he, from time

" to time, receives and becomes responsible for
 " certain sums of money to be expended by him
 " for the school purposes of said Municipality,
 " Know all men by these presents that we the
 " undersigned———of———in the County
 " of———,———, and———of———in
 " the County of———,———, do hereby bind
 " ourselves jointly and severally (solidairement)
 " to and in favour of the School Commissioners
 " of said Municipality, in the full amount of all
 " moneys which may at any time have been
 " received by said Secretary-Treasurer for said
 " school purposes, the condition of the above
 " bond being that if the said sums of money be
 " duly expended for said school purposes, this
 " bond be void and of none effect, but that
 " otherwise it have full force, value and effect.

" _____

" _____"

" KNOW ALL MEN BY THESE PRESENTS that
 " at———, in the County of———, on the———
 " day of———, 18———, at———of the clock in
 " the———noon, there personally appeared before
 " me the aforesaid———and———, and that
 " they there and then signed and acknowledged
 " the above bond, and I have signed

" _____

" *Justice of the Peace.*"

Every Board of Commissioners should have printed forms of agreement to be signed by the teacher and themselves in duplicate, each keeping a copy. One form we have seen runs somewhat as follows :

" I,——, engage to teach School in District
 " No.——of the Municipality of——for——
 " months, commencing the——day of——
 " 187—, for the sum of——dollars per month,
 " or \$——in all, to be paid monthly. I further
 " agree to do my best to carry out all the regu-
 " lations for the management of their schools
 " issued by the Commissioners of the aforesaid
 " Municipality.

" I hold a——Class——Diploma, bearing
 date——, 18——, and I have signed

" ————

" *Teacher.*"

" I, the undersigned, hereby accept the fore-
 " going engagement in the name and authority
 " of the aforesaid Board of School Commission-
 " ers, and I have signed at——on the——
 " day of——187—.

" ————."

School Commissioners are also bound by law to communicate, in writing, general rules for the management of their schools, to teachers. This duty is almost universally neglected. We subjoin a list of rules, copied in part from those in force in the Montreal schools, which may be altered to suit the cir-

cumstances of each municipality. They might conveniently be printed on the back of the forms of agreement with the teachers; and let us here warn teachers of the great desirability of never beginning to teach a school without possessing a form of agreement signed by the Secretary to the School Commissioners.

In regard to Rule 2, each Board of Commissioners is required by the circular issued by the Superintendent of Education in 1857, to furnish trustees with a School Journal or Register, as also with a book in which Inspectors and others may enter reports of their visits.

REGULATIONS ISSUED TO TEACHERS BY THE
SCHOOL COMMISSIONERS OF THE MUNICI-
PALITY OF———.

1.—The school hours are to be from 9 to 12 a. m., with fifteen minutes' intermission, and from 1 to 4 p.m., with intermission. Scholars offending may be kept in till 4.30 p.m., when thought desirable by the teacher. Very young children may be dismissed before the rest.

2.—The Teacher shall make regular entries of the attendance of Scholars in the School Journal supplied for this purpose. If at any time required to do so, she shall send the Secretary-Treasurer a record of the average attendance of scholars, and a list of the children in her district whom she believes to have gone to no school during the past month.

3.—A "Time Table," or "Programme of Daily

Studies," shall be posted up in each school, as well as a copy of Rules 6, 7, 9 and 10 as laid down below.

4.—The work of the day shall begin with the reading of a portion of Scripture, the scholars all standing, if convenient.

5.—The teachers are recommended to try and practise the scholars in singing or in the drawing of simple objects, for a short time, about the middle of each forenoon.

6.—The teacher shall not instruct a child in any lesson unless he is provided with the prescribed text book for that lesson.

7.—The scholars must be warned that the conditions on which they will be allowed to attend school are, punctuality, respectful obedience to teachers, pleasant intercourse with schoolfellows, freedom from infection, avoidance of injury to school premises and furniture, and abstinence from immorality in speech and action.

8.—Scholars breaking these conditions may be sent home for the day. Other punishments allowed are: (1) "Standing out" on the floor or on the form. (2) Tasks to be done at home. (3) Keeping in at recess or till 4,30 p. m., but not later. (4) Whipping on the hand with the taws. (5) Suspension for a week, such suspension being reported to the Chairman of School

Commissioners, who shall inquire into the cause and try and see the scholar's parents. It is suggested that the hope of reward is more powerful for good than the fear of punishment. One of the best rewards is private or public commendation from a judicious teacher.

9.—Scholars who absent themselves from school are to be punished on their return, unless they bring a written excuse signed by their parents.

10.—Teachers may require their elder pupils to aid them in teaching or keeping order, but not for more than five hours in any one week, except by consent.

11.—There shall be a Public Examination of the scholars in December and March. Parents and School Commissioners shall be duly notified of the day and hour.

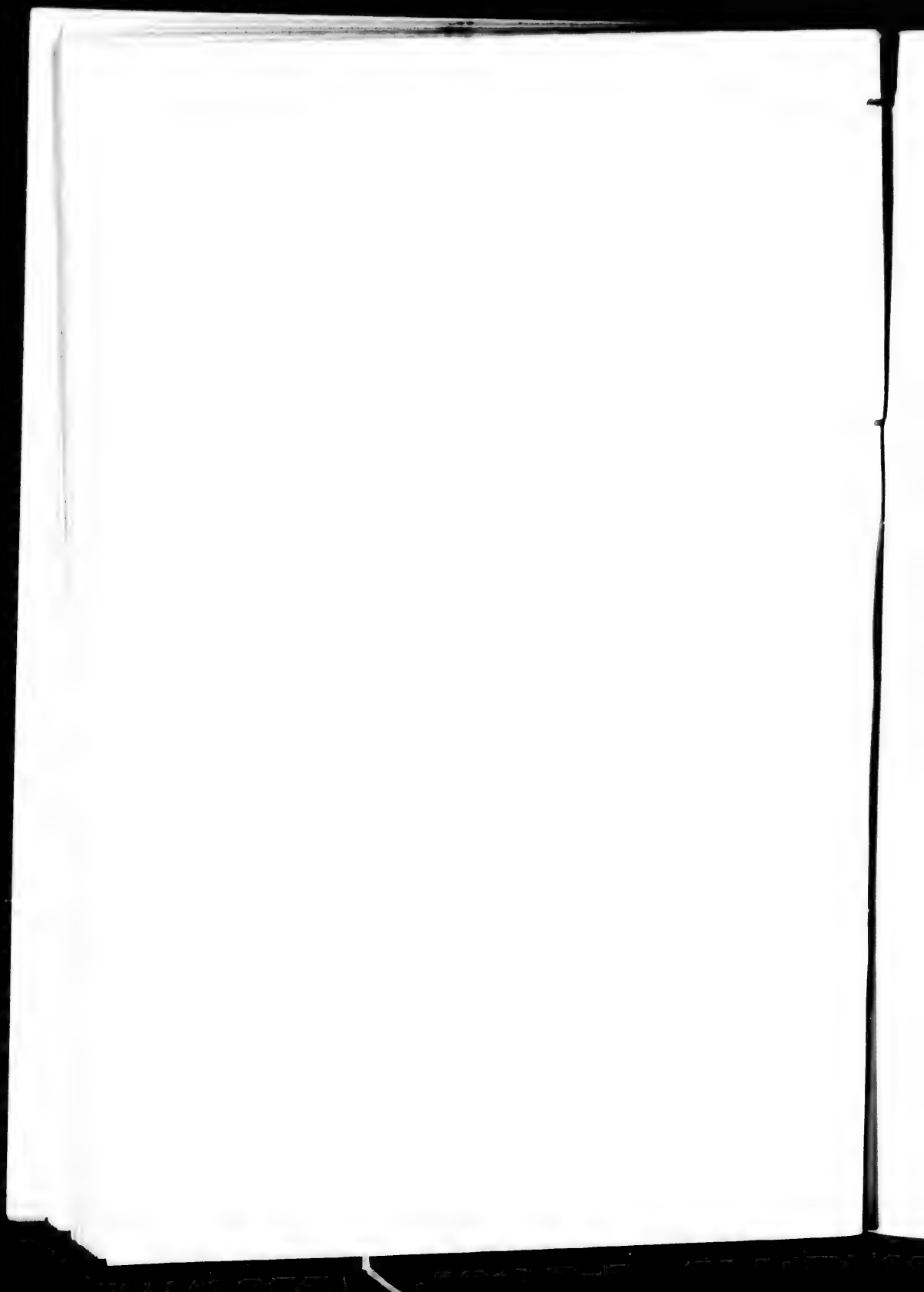
12.—The holidays shall be: Every Saturday; the Queen's Birthday; Good Friday; Christmas Day, and three days annually to attend the Teachers' Convention, if devoted to that purpose. Vacation commences on July 1. If their services are not required after that date teachers will receive due notice on or before May-day in each year. Resignation from a teacher must be sent in before then, or she will be expected to teach the following year.

L'ENVOI.

O'er wayward childhood would'st thou hold firm rule,
And sun thyself in light of happy faces?
Love, Hope and Patience these must be thy graces,
And in thine own heart let them first keep school.
For as old Atlas on his broad neck places
Heaven's starry globe, and there sustains it, so
Do these uphold the little world below
Of Education ;—Patience, Hope and Love.
Methinks I see them grouped in seemly show,
The straightened arms upraised, the palms aslope,
And robes that touching as adown they flow,
Distinctly blend like snow embossed in snow.

Oh, part them never ! If Hope prostrate lie,
Love, too, will sink and die.
But Love is subtle, and doth proof derive
From her own life, that Hope is yet alive ;
And bending o'er with soul transfusing eyes,
And the soft murmurs of the mother dove,
Woos back the fleeting spirit, and half supplies.
Thus Love repays to Hope what Hope first gave to Love.
But haply there may come a weary day,
When overtasked at length,
Both Love and Hope beneath the load give way ;
Then with a statue's smile, a statue's strength,
Stands the mute sister, Patience, nothing loath,
And both supporting, does the work of both.

COLERIDGE.



OBJECT LESSONS.

BY S. P. ROBINS, M.A , LL.D., SUPERINTENDENT OF PROTESTANT
SCHOOLS, MONTREAL.

A paper read at the Convention of Protestant Teachers
of the Province of Quebec.

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The question that meets us at the outset of our enquiry into the nature of the Object Lesson is this:—What is its purpose? The Object Lesson is one of the manifestations of that vastly increased interest in popular education, which is so characteristic of the present century. What want, instinctively recognized or openly expressed, was it intended to meet? In what respects did the instruction furnished in schools fail to meet the demand for knowledge of an important kind, or to educate faculties of which the full control was needful for success in life? And how was the Object Lesson expected to supplement the work of schools? To answer these questions we must consider the character of the schools in which the Object Lesson was introduced in its present form, and what instruction and education they really gave.

So far as I am aware, Object Lessons, wherever originated or introduced, have been specially used in schools of primary grade, and more especially in those of low social character. In the attempt, by popular instruction, to lift to a higher level of culture the sunken classes of the Old World, the ill-fed and boorish children of the peasantry, the neglected offspring of the crowded and squalid populations of manufacturing centres, it was soon found—remember that I am speaking generally and that individual exceptions are very numerous—that amid such unfavorable surroundings the stock of general information of the pupils was limited, the number of things with which they were familiar few, their knowledge of the mother-tongue very inadequate, and, consequently, their mental faculties were, on the whole, obtuse and sluggish, even though in some directions precociously developed by hardship. At first, indeed, it was hoped that these difficulties would disappear as school instruction advanced; but no very wide experience was necessary to show that some of them lay at the very threshold of learning, so that they had to be encountered before school instruction could properly begin, and that others were of such a character that school discipline could not meet them effectually. For, in the first place, all school arrangements suppose a certain amount of precedent cultivation, considerable familiarity with the mother-tongue and some facility in its use, a stock of common ideas, and a habituation to the use of the various mental faculties. All these the child of intelligent parentage has, and this to so great an extent that the stock of knowledge of such a child of six years of age bears no insignificant ratio to that which he will acquire in addition during his school career. But, when a child appears in school whose only companions have been the degraded, whose only incentives to action have been hunger, thirst and blows, whose vocabulary is limited to the expression of his animal wants and gratifications, it is scarcely to be conceived, without experience, how inert and sluggish will be the mental power, how meagre the mental furniture, and how

disappointing in its results the efforts at instruction. It was evident, further, that the ordinary school instruction could not remedy such a state of ignorance and mental torpor. Reading, writing, spelling, arithmetic, became mere mechanical exercises, learned, so far as they could be learned at all, by rote, and affording little or no mental enlightenment or discipline. The experience of painstaking and conscientious teachers soon showed that nothing but converse—oral converse—between the pupil and the teacher could arouse the inactive mind to healthful and fruitful exertion. Such conversational lessons were the seed from which Object Lessons in their highest development sprang. Pestalozzi used them chiefly as a means of cultivating language, so that his pupils might become familiar with the meaning and the use of words in regions of thought that lay a little beyond their daily experiences. Disciples of that ingenious and brilliant though erratic and visionary teacher, enlarged his conception of the Object Lesson by making it subserve the purpose of more or less systematic instruction in useful knowledge, and with more or less definiteness and consciousness of purpose used it as a means of developing the powers of thought.*

To the empirical slowly succeeds the scientific stage of education. In orderly array the varied activities, physical, mental and moral, of a child have passed in review before the increasing body of scientific educators. Attempts, more or less successful, but in any case still imperfect, have been made to determine the sequence and mode of development of the mental powers. The various branches of school study and the prevalent modes of instruction have been examined with a view to determine—not merely with what intellectual equipment the school boy steps out into active life—but what faculties have been exercised and strengthened in acquiring that intellectual equipment, and what, if any, remain undeveloped or even by disuse have become atrophied. The

* Consult Krusi's "Pestalozzi, his Life, Work, and Influence," an excellent work that should be read by every teacher.

result of such enquiries has been to bring into view the necessary imperfection of the ordinary school curriculum as an instrument of mental culture—to demonstrate the value as an introduction to successful life, not only of the moral qualities, but also of the mental habitudes cultivated at home in intercourse with friends, and in the play-ground in collision with playmates—and to evoke the question: Can nothing be advantageously done to systematize and to pursue, of set design, the cultivation of the intellect, where hitherto it has been left to the desultory and undesigned influences of out-of-school life? Let us, for our present purpose, adopt as an enumeration of the faculties of the intellect, consciousness, sense, reason, judgment, abstraction, imagination, understanding, memory; and, to avoid confusion, define these to be; consciousness, the faculty that gives us subjective phenomena; sense, that which gives us objective phenomena; reason, that which gives the logical antecedents of phenomena; judgment, the faculty which compares phenomena and gives differences, resemblances and relations; abstraction, that which analysing phenomena gives abstract notions and so classifies and generalizes; imagination, the faculty which re-unites abstractions, and so creates, invents and plans; understanding, the faculty which uses and comprehends signs of ideas, and so, by language in all its varied forms, receives and communicates thought; and memory, as the faculty which recalls mental impressions of every kind. With this enumeration before us, it must be evident to all who have the necessary experience of school life and duty, that but few of these faculties are directly and designedly cultivated, that some only of those that remain are incidentally trained, and that, even where the training is most explicit and thorough, it is very far from developing the faculties affected in all directions. In other words, the allegation is that some faculties are not trained at all, some only by accident, and none of them completely and harmoniously. Of the intuitive faculties neither consciousness nor reason is trained at all, and any training of sense is accidental, inde-

finite, uncertain, and most imperfect. The training of consciousness and reason are deferred, some think necessarily, to a period subsequent to school-days; that of sense which cannot be postponed is relegated in the main to the playground, the street and the fireside. The eye is indeed trained to the discrimination and recognition of forms in reading, writing, spelling, map-geography and geometry; the ear to observe musical sounds and the intonations of speech; the rest of the senses receive no attention in school. Judgment receives but little training. Imagination is somewhat developed through the understanding in various school exercises, but is not trained to independent action except in composition, and in inventing solutions of arithmetical, algebraic, and geometric problems. The development of memory is very disproportionate; it is loaded with verbal statements and with numerical combinations, some aptitude for remembering forms is acquired, in other respects it is neglected. The school curriculum, then, has left each sense to be trained in most or in all of its uses; the powers of consciousness and reason to be subjected to the control of the will; judgment, abstraction and imagination in most of their applications to be disciplined; and the memory to be developed along with the developing faculties. It may not be desirable during childhood to attempt to arouse consciousness to voluntary action in the act of reflection, and the sphere of activity of reason is but limited in early life, but the remaining faculties are more or less vigorous. How can they most advantageously be drilled to orderly and effective service? I think, that the full answer to this question has never been given; that, indeed, the full answer could not now be received if any man were wise enough to give it. Yet educators have furnished two answers, which, though but partial, are practical. The first is, that Object Lessons effectually train some powers neglected in ordinary school work. The second is, that the methods of the Kindergarten do so.

The purpose then of the Object Lesson, as by the light of

psychology we now begin to regard it, is mainly the development of the intellectual faculties of childhood, more especially of those which are comparatively neglected in the ordinary school curriculum. It does not indeed neglect the older purposes of training in the use of language and of imparting useful knowledge, but these purposes should be, and in the best use of the Object Lesson are, made subsidiary to this main purpose, the educational discipline and training of the intellect. As the secret of all educational discipline is the frequent repetition, under direction, of mental acts, the successful conduct of an Object Lesson will place the teacher in his true position of guide, critic and corrector. The mental exercises must be performed by the pupils themselves, not by the teacher. The knowledge acquired must be discovered by the learners, not revealed to them. But knowledge not received on testimony is either intuitive or derived by inference. Intuitive knowledge can only be attained in the actual presence of the object of thought, and even the process of inferring knowledge is frequently much facilitated by its presence; hence the need for submitting an object to the learner's investigation. An exhaustive view of any object can seldom be obtained except by adding to the results of our own observation, experiment and thought, the results of the observation, experiment and thought of others. Hence some information respecting the object under examination may be collected from books or be received from the teacher, but this should be as small in amount as possible. In the course of an Object Lesson, to allow the knowledge of the pupils to be imperfect is often preferable to supplementing that knowledge by testimony. Knowledge reached by the pupil is almost necessarily fragmentary, disjointed, ill-arranged. It becomes science only when by subsequent effort it is reduced to an orderly system, in which the parts are duly correlated. This systematizing of the results of investigation is one of the most important parts of an Object Lesson.

We are now, perhaps, in a position to define the Object

Lesson. This is the definition which I venture to submit. An Object Lesson is an exercise in which, under the guidance of a teacher, pupils, expressing themselves in appropriate language, 1st, review the knowledge they already possess respecting an object or a topic; 2nd, add to that knowledge primarily by the use of their own faculties, secondarily, by receiving additional information from the teacher or from books; and, 3rd, systematize the whole.

With this view of the Object Lesson, there will be no danger of supposing it to be a mere word lesson, or a lecture by the teacher conveying more or less entertaining information. Such views are imperfect, not erroneous. The definition proposed above implies the value of the Object Lesson as an exercise in the use of language. All true teachers feel it to be of the utmost importance to secure for their pupils as much practice in oral composition as is possible. Hence the endeavour to get pupils to give in their own words their impressions of lessons. The great difficulties with this exercise are, 1st, that pupils often only give as much as they can remember of the language of the text-book or of the teacher; 2nd, that barrenness and confusion of statement result as often from the incompleteness and incongruity of their conceptions as from the poverty of their vocabulary and their want of mastery of syntactical forms. It is therefore of great value to secure an exercise in which children must endeavour to put into language, that is not a mere imperfect echo of the utterances of their teacher, their impressions of an object of which, being present, their conceptions cannot be incongruous, and, being under examination, cannot remain very remarkably incomplete. It adds also very much to the clearness and vividness of the ideas which words suggest to have them associated directly with the intuitions of sense by using them in the description of present objects. On this account it is that Object Lessons are particularly valuable in teaching the conversational use of a language. Indeed, it is by a desultory sort of Object Lesson that a child learns to use so soon and so skilfully its

mother tongue. While then I caution teachers against making the Object Lesson a *mere* word lesson, and advise the observance of a wise reticence on their part, let me not be understood to imply that the teacher must never give utterance to the thought of children. It is often his duty and his opportunity to do this, but his more matured, accurate and appropriate expression must succeed not precede their attempted utterances. He must give no new word, recall no forgotten word, until its want is felt, either for brevity, or for exactness, or for force. The review of knowledge already possessed is valuable as an exercise of the memory and of the understanding in recalling and expressing a conception. But it is also of service in informing the teacher of the state of knowledge of the pupils, so that he may not tediously dwell upon what is already clearly conceived, nor fruitlessly aim at what is beyond present attainment, nor assume as known what is not understood. It will be observed, and perhaps it will be objected, that I have introduced into the definition the word "topic" as alternative to the word "object." To those who on the ground of the title, Object Lessons, demur to class under this title lessons on topics, I plead in excuse that such an extension of the meaning of terms as this classing implies is not unwarranted by example, as I am by no means the first who has been compelled to employ the term Object Lesson in a sense wider than is justified by its derivation, for lack of a pre-existing term or phrase of sufficient comprehensiveness. I would further plead that the boundary between Lessons on Objects and Lessons on Topics will be found by no means well defined in actual practice, and that many lessons on topics, except in regard to sense intuitions, require the same treatment and cultivate the same faculties as Object Lessons. Omitting, for the moment, remark on what constitutes the very essence of the Object Lesson, viz., the acquisition of knowledge by the use of children's own faculties, let us observe that in the impartation of knowledge by the teacher orally this advantage over its impartation by books is secured, that the pupil is practised in observing carefully and remembering

accurately what is said—a preparation for business and for public life which cannot be overvalued. But as oral instruction should be, and is, given in other subjects, the Object Lesson has in this particular no superiority to them; and but for the need of occasionally filling in gaps in the systematic scheme of an Object Lesson that cannot be filled by the observation, experience or experiment of children, and but for the quickening of interest that results from the presentation of the novel and the strange to youthful minds, it would, as a matter of mental discipline simply considered, be better for the teacher to give no information at all. However, the Object Lesson will never cease to be to some extent an information lesson, and the sole caution to the teacher must be to avoid giving any information that by their own powers of observation, conjoined with inductive and deductive inference, pupils can of themselves attain. Of course nothing here said will be considered adverse to such a directive suggestion as the teacher may make in reference to the subject of investigation. As the last of these brief comments on the definition, I must say that the systematizing of the whole mentioned in it refers rather to the minor arrangement of the items of information than to the general scheme of the Object Lesson which must usually be provided by the teacher before the lesson commences, and which may be common to many different Object Lessons, since the most natural, and to beginners obvious arrangement, is one dependent on the use, in a definite and systematic manner, of the several faculties employed in the investigation of truth.

Permit me now to submit a scheme for the management of an Object Lesson, which, though not at first set before children, may be present to the teacher's mind as a type of method to which he may by suggestion and restraint advantageously induce the discursive mind of childhood to conform, and which may be afterwards formally introduced section after section, as the acknowledged guide of investigation, until the matured powers of the pupils and the peculiarity of the

object investigated combine to render some other scheme preferable. I propose five general heads—

1. Parts and Materials—Separation. Analysis.
2. Qualities—Ascertained by observation.
3. Susceptibilities—Ascertained by experiment.
4. Relations—Ascertained by reason, judgment, abstraction.
5. Associations—suggested by imagination.

In conformity with this arrangement the preliminary review as well as the subsequent lesson should be conducted. It would be advisable to have a definite course of Object Lessons corresponding to the mental capacity of children of the several school grades. This course should rise from the lower to the higher grades along a line determined not so much by the subjects chosen as by the mode of treatment. The same subject might recur again and again in the course, being treated with more minuteness, fullness and profundity as the powers of pupils develop. Iron, for example, might be the subject of a profitable Object Lesson with children five or six years of age, or of interesting and instructive discussion at a session of a scientific congress. The mode of treatment in the two cases would certainly be different, but not dissimilar.

The scheme given above is one that easily lends itself to the difference of treatment rendered necessary by different stages of culture. At first it would be well to direct attention to the second and third heads of the scheme in connection with simple substances, discovering by observation and experiment their qualities and susceptibilities. A useful sub-division of the head Qualities might be founded on the senses by which qualities are discovered, still further subdivided into the qualities given by each sense. The subscheme to Qualities would then be something like this;—

2. QUALITIES.

- | | |
|---------------------------|--|
| a. Sight—Color. | } Distance, Motion.
Solids, Liquids, Gases,
Shape, Size. |
| b. Touch—Temperature | |
| c. Muscular Sense—Weight. | |

- d. Hearing—Pitch, Intensity, Quality of sounds.
- e. Taste—Sour, Sweet, Bitter, and their combinations.
- f. Smell—Odors (scarcely susceptible of classification).

The study of numerous objects, covertly conducted by the above scheme, should familiarize the pupils with the several conceptions (and their names) embraced under it. A series of lessons on most of the qualities enumerated above should follow, and should issue in the ability to recognize, to classify, and to name the several primary, secondary and tertiary colors; lineal, superficial, and solid forms; the inch, foot, yard, as measures of size; the furlong, quarter-mile, half-mile, mile, as distances; uniform, accelerated, retarded, irregular, rectilineal, circular, curvilinear motions of translation, and rotary motion; the ounce, the pound; different temperatures by momentary touch, and the different conducting powers of bodies by their apparent temperatures when tried by prolonged touch. Afterward, many objects should be examined carefully with the scheme and its sub-divisions before the pupils, as a guide to systematic and minute observation. As the next step in the discipline of the observing powers, let objects be subjected to examination for brief periods only and then withdrawn, and let the endeavor be made to register as many facts as possible about them. Pictures, in series of increasing complexity, are very suitable objects for this exercise, so far as the eye is concerned. The exercise just suggested leads the way to the most difficult, yet in many respects most valuable, exercise of the observing faculties; that, viz., of remarking the varying appearances of bodies undergoing change, and of committing to memory in due order and comprehensiveness their successive phenomena. While observing nature these must often be seized in their flight. Successive forms, swiftly evanescent, make no sufficiently deep and abiding impression on the undisciplined observer. As a teacher of elementary science, I have had frequent opportunity to remark and to wonder at the confusion of mind of tyros who attempt to give minutely and in orderly series the processes and the results of a simple

chemical experiment, even when, under direction, it has been performed by themselves. In the first steps of training to observe change, it is desirable for the teacher to predict minutely the changes that will occur. At a subsequent part of the course, it will be well to indicate generally the points to which attention should be directed. Finally, pupils must be practised in observing unexpected changes.

The third head—Susceptibilities—will afford many opportunities for practice in the observation of change. Susceptibilities include the ways in which a substance is affected by various other substances and agencies, and are determined by trial, by experiment. In a course of Object Lessons only, the chief and most common of these substances and agencies, need be considered, viz., mechanical force, water, heat and cold. By these the third head may be thus subdivided:

3. SUSCEPTIBILITIES.

- a. Mechanical force.—Hard or soft—tough, flexible, ductile, malleable, brittle, fissile, friable—compressible, elastic.
- b. Water.—Can it be wetted? is it absorbent? does it dissolve? does it color water? will it float or sink? is it acted on in any other way?
- c. Heat and Cold.—Will it expand? melt? boil? burn? explode? congeal?

Following the same general course of procedure as recommended under the head Qualities, it will be well, having familiarized the pupils with the several susceptibilities given above by a series of miscellaneous lessons, to give a series of special lessons on each, and afterwards to examine every new substance submitted according to the systematic scheme above proposed.

In bringing the sensible qualities and properties of bodies under the notice of pupils, it will be well to remember that attention to these is aroused at first by difference of sensations, especially when these are strongly contrasted, as sound renders succeeding silence more impressive. By judicious

appeal to this principle the teacher will arrest attention powerfully, and so fix in the memory securely.

When, by the examination of simple objects, some familiarity with the notions classified in the scheme so far set forth has been attained, objects more or less complex may be examined, and the use of heads 2 and 3 must be preceded by the first—Parts and Material. Here will the powers of analysis be consciously exercised, and the powers of description taxed. Children must be instructed and practised in proximate, intermediate and ultimate analysis. The more obvious canons of subdivision must be stated and illustrated, and then practised by the children themselves in the division of complex objects presented to their examination. These they must be taught to divide comprehensively, exhaustively, exclusively, and in due subordination; that is, to divide into the smallest number of parts founded upon real differences, that are entirely separate from each other, and that together make up the whole, giving them prominence in the order of importance; similarly to subdivide each part, and so to continue until further subdivision is impossible or unnecessary. They must further learn to bear in mind without confusion amid details, the scheme of subdivision, so that they can reproduce it complete and in order at will. This much neglected discipline conduces remarkably to acquiring the power of orderly, clear, continuous and exhaustive thought, and is of incalculable value in subsequent study.

At this stage may commence attempts at description. After an orderly enumeration of parts has been made, and each part has been examined as to Qualities and Susceptibilities, an essay to set the whole before the understanding in words as it has been presented in the examination should be made. The difficulty here is in presenting clearly and concisely what the *eye* has observed of size, motion, color, and yet more especially of form. He that has learned to present to the understanding a clear conception of an intricate form, will find but little difficulty with the much less complex con-

ceptions that remain to be expressed by language. Clear and complete description depends on comprehensive, exhaustive, exclusive, and duly subordinated subdivision, so that the former may and should proceed *pari passu* with the latter. In description, let a few, bold, accurate touches outline, as in a painter's sketch, the main features; then, proceeding from the greater to the less, fill in the picture, only giving pre-Raphaelitish detail in exceptional cases. A most valuable test of the accuracy and fulness of a description, unfortunately applicable only in a few instances, is the attempt to reproduce it in a picture. Dictation exercises in drawing, inverted as it were, will strongly arouse a class, and deeply interest it in careful, precise and adequate description. Let the teacher, chalk in hand, draw on the blackboard what his pupils say in the attempt to describe some simple form, as one of the Roman Capitals, or even one of the algebraic signs, and he will evoke an amount of enthusiastic interest and of ingenious use of language that will surprise him as much as it has often surprised me. A dictation exercise in drawing is of great value as a test of the comprehension of language, but the inversion of it, in which the pupil dictates and the teacher draws, is still more valuable as a test of analytic power, and of the ability to use language for purposes of description. The number of persons who can describe with accuracy is limited. Even in this assembly of teachers I venture the assertion that there is more than one person who would fail in his first attempt to dictate one of the Roman Capitals, say even H. The test just indicated is, of course, applicable only in simple cases. But a somewhat similar test of accuracy and fulness of description is applicable even in complex instances. We may always mentally reproduce a description, and children should be encouraged to do so with their own descriptions and with those met with in books. So they will detect incongruities and deficiencies in description by the obvious impossibilities and hiatuses of the mental pictures. With such a training it would have been impossible for the immortal Irish orator

to have said: "I smell a rat; I see it in the air; but, mark me, I will nip it in the bud." With such a training it would have been impossible for Professor Bain to commit in his "Education as a Science," a hundred solecisms such as this on pages 214 and 215. "A piece of information, a moral lesson, can be wrapped up in a short tale, and brought home with impetus. As there is a considerable expenditure of mind in proportion to the result, the information or moral should be well selected; every little point in the vast area of useful knowledge cannot afford the requisite machinery."

When in the awakening mind reason, judgment and the synthetic faculty are apparent, we may introduce the fourth, which is also in many respects the most important head of our scheme—Relations. The most important because of the importance of the faculties drilled, and because the ordinary school course has so little bearing on them in many of their modes of exercise. Everything has relations to things antecedent, to things contemporaneous, and to things consequent. If the object examined be artificial, the things antecedent to it, which have important relations to it, will be the design from which it sprung, and the mode of manufacture by which the design was embodied in the article. The design originated in a feeling of want that should be analyzed, and was doubtless progressively improved in a mode of development that should be traced. The process of manufacture is often both interesting and complex, one that under the guidance of the teacher may often be deduced, and should, when possible, be so deduced rather than detailed by the teacher. If the object examined be natural, the history of its genesis and development and their necessary conditions, so far as these are within the observation of pupils, should be traced. Thus will causes of things be revealed. The relations of the object to things contemporaneous are manifold; but those of greatest importance will group themselves under the heads of Uses, Classification and Substance—Uses, embracing a consideration of the qualities and suscep-

tibilities of the parts and of the whole, in relation to the purpose and the requirements of the whole—Classification, embracing the right setting of the object in its place, as a part of the totality of things—Substance, embracing a just conception of the relation of the phenomenal to the real, of what is to what appears. The relations of the object to things consequent will be in the main two—the first the effects on other things, the second the effects of other things upon it, in other words, its possible future modification and development.

The sub-division of the heading, Relations, beginning with the present, which is the nearest and most readily apprehended, may be:

- a. Classification—Relation to similar things.
- b. Uses—Parts, qualities, and susceptibilities in relation to each other, and to the purpose and requirements of the whole.
- c. Substance—What is, inferred from what appears.
- d. Causes—If artificial, development of the design and manufacture of the article; if natural, history of its development.
- e. Effects and future development.

These sub-headings are not all equally applicable to every Object Lesson. Those to which attention should first be directed, and which are indeed all but universally applicable, are Classification and Uses. In Classification the pupil is taught to ascend from particular to general conceptions, the mode of mental procedure being almost the converse of that by which a complex object is divided into its parts. The first step in the classification must be as little comprehensive as possible, must, in other words, embrace the smallest number of individuals to which we can give a general name; or, still in other words, the individuals of the class first formed must coincide in as many points as possible, their divergencies must be as few and as unimportant as possible. Before ascending another step in the classification, the points

of agreement in the individuals of the class just formed should be carefully enumerated, and actual or permissible differences also indicated. Let the next superior class be then similarly formed, and so upward until the most comprehensive class is attained. The meaning of the term Uses must not be unduly restricted. In many cases the object may serve no purpose of man, yet its parts may have a subservience to the whole, to trace which will prove a most valuable discipline of imagination and judgment. So the most insignificant and worthless of living things has organs and functions subordinated to the whole, and having intricate and interesting relations to it, and to each other.

Later in the course, relations of Cause and Effect may be introduced. These relations are, of course, most readily traced and understood with things artificial, and the study of artificial things from this point of view is a necessary preliminary to the study of causes and effects among natural phenomena. As before indicated, the history of the production of any artificial thing is two-fold. The first part is the history of the design, the second is the statement of the mode of manufacture. Neither is of much value as a means of education when detailed by the teacher. Both are of the highest educational importance when rightly presented. The want or inconvenience that led to the first primitive device should be carefully analyzed in its relation to the invention. The rude original contrivance, commended to adoption by its simplicity and accessibility, should be re-invented by pupils. Its imperfections and inconvenience should be pointed out by themselves, or, in the last resort, by the teacher. Improvements should be suggested, and adaptations to the various conditions of requirement should be indicated, until from its primary rude condition, through its various stages of development, the completed design with all the modifications that fit it for varying uses has been traced by the exercise of the intellects of pupils themselves, aided only by occasional suggestion from the teacher. Then will pupils be prepared to follow with lively interest any details

of the actual historical development that the teacher may be prepared to give. So, too, the teacher's statement of how an article is made should be preceded by an effort of invention by the pupils; they should show how they would proceed to make the article. The difficulties that they would encounter in their mode of manufacture should be pointed out, one pupil criticizing the method of another. The young inventors should devise means of surmounting the suggested difficulties, until the problem being distinctly before them, partially solved by their own endeavour, they could intelligently and with interest follow the solutions given in the practice of men.

The remaining particular under the head Relation—Substance—is one that will but seldom present itself in school work, though practice in discriminating between apparition and reality, and in deducing from phenomena the underlying substance that they both cover and reveal, is a most desirable preparation for life, in which men who occupy important positions are necessarily constantly employed, in attempting to discover hidden motives concealed by professions and laid bare only in issues. Its use must always be preceded by an exhaustive examination of the phenomena, so that all that appears shall be submitted. Then reason, judgment, imagination must conjointly give an explanation or explanations that shall account for all the phenomena. When these powers give alternative explanations, the phenomena must be re-examined, in the hope of discovering unobserved some phenomenon that may afford means of discrimination.

The last general head proposed is Associations. Here the method of treatment will vary so much with the subject and with the idiosyncrasies of temperament of teacher and pupils, that I shall not attempt to furnish a category of sub-divisions. Let each teacher deal as he pleases with any object in its aspects of grandeur or beauty, of pathos or fun. To see in any object "the light that never was on sea or land" is the heritage of those who possess, as I do not, "the poets' eye in a fine frenzy rolling."

I have found it an excellent exercise to take an occasional lesson in invention pure and simple, commencing under the head Parts, by an analysis of the want and by a statement of the obviously requisite parts of the invention; proceeding next to the Materials to be used in the several parts, after consideration of the Properties essential to the materials in relation to the purposes to be subserved; and, finally, under the head of Qualities, determining the size and shape of the several parts. The method of procedure is, after suggesting any material, or proposing any form, to criticize it as severely as possible, and to devise means of obviating the objections raised.

In illustration let us take a lesson on the invention of an ink-bottle, as actually conducted in class by the writer. It should be remembered that the many particulars given were suggested at random by members of the class taken down upon the black-board, and subsequently arranged in order, the arrangement often suggesting other particulars evidently required for the completion of the scheme.

NOTES OF OBJECT LESSON ON AN INK-BOTTLE.

Practice in Invention.

- I. Parts required—For simplicity these should be as few as possible.
 - a. Receptacle for ink, so shaped as to stand.
 - b. Opening to receptacle.
 - c. Cover.
 - d. Place for pen.
- II. Material chosen.

Necessary and desirable properties of material.

 - a. Non-absorbent of ink.
 - b. Chemically indifferent to ink.
 - c. Rigid enough to maintain its shape.
 - d. Strong enough to resist hard usage.
 - e. Hard enough, not to be easily scratched.
 - f. It should be inexpensive.

- g.* And easily wrought.
 - h.* And light.
 - i.* The part which the pen-point strikes in dipping should be soft.
 - k.* Transparency would be advantageous.
- The following substances were proposed :—

1st. For the Receptacle.

- a.* Wood was rejected because it is absorbent.
- b.* Soapstone because it is too easily scratched.
- c.* Lead iron, copper, because not chemically indifferent to ink.
- d.* Glazed earthenware because the glaze cracks, and then the ink is absorbed.
- e.* Gold and silver, because too expensive.
- f.* Porcelain and glass were accepted as fulfilling, when thick enough, all necessary conditions, but glass was preferred because of its transparency.
- g.* A pad of vulcanized rubber was suggested for the pen-point to strike on in dipping.

2nd. For the cover, which should also be the place for the pen, any metal was deemed suitable.

III. Qualities.

In choosing the material all essential qualities except size and shape were already determined.

1st. Size—Essential :—

- a.* That the pen should dip into the ink neither more nor less than $\frac{1}{2}$ an inch;
- b.* That the total dip into the bottle should not exceed one inch and a half; and
- c.* That the bottle should hold from one to two ounces of ink.

2nd. Shape.—This must be such that

- a.* It shall not be readily upset; hence the centre of gravity must be low, and there must be no projecting corners to catch in anything.

- b. If overthrown the ink shall not spill; this implies an inverted tube as in a common form of pocket ink-bottle.
- c. The pen shall dip into a constant depth of one half-inch of ink; this implies the principle of the bird fountain, as in common form of mucilage bottle.
- d. Dust shall be excluded; for this a cover, as already suggested, will provide.
- e. The ink shall not be exposed to evaporation; this implies a very small surface of ink exposed to the air.
- f. The pen shall not dip into sediment; this implies a dome shape to the pad on which the pen strikes, so that sediment shall not rest on it.
- g. It may be easily cleaned; hence it must have a smooth contour without angles both inside and out, and it must afford access to the interior.

It would be interesting, but for lack of time, to follow in detail the multitude of devices absurd, contradictory, inadequate, ingenious, suggested by the class in attempting to meet the various conditions, hard to reconcile, laid down in the foregoing scheme—a scheme proposed by the class itself in considering what was desirable in an ink-bottle, and in recollecting the various mishaps that its members had experienced in the use of ink. These suggestions were considered, criticised, adopted provisionally, laid aside or finally adopted by the class, and issued in the adoption of a bottle of which a description follows. Externally, it was a smooth hemisphere of colorless glass, of two and a half inches radius. Two round openings communicated with the interior; the first one-fourth of an inch in diameter, placed at the summit of the hemisphere, was for the dipping of the pen into the ink, and was loosely closed for exclusion of dust by a light, metallic, hinged cover; the second, for filling the bottle, was three-eighths of an inch in diameter, was placed about three-fourths of an inch from the former opening, and was covered with a screw cap, recessed into the glass so as not to interfere with the smooth hemispherical contour of the bottle. In-

teriorly, the bottle presented a pear-shaped receptacle for the ink, with the broad part of the pear, much exaggerated in breadth, uppermost, so that the eye of the pear would coincide with the opening at the apex of the hemisphere. From this opening depended into the receptacle a tube of glass, one-fourth of an inch in diameter, open above and below, sealed above all around to the opening, and reaching below to within three-quarters of an inch of the bottom of the ink receptacle. Beneath the tube, and resting on the bottom, was a hemispherical pad of rubber three-eighths of an inch in diameter. Finally, on the top of the metal cover was a groove, in which the pen might be laid when the cover was closed. A little consideration will show that we had secured a bottle that could scarcely be upset, that would not, if upset while the screw cap was on, spill the ink it contained, that secured the ink from evaporation and dust, that would not allow the pen to dip too deeply nor into sediment, that saved the pen-point from injury, that, by loosening the screw-cap, could be filled, and that, by removing the cap, could be easily and thoroughly cleaned. All this of cheap material and without complication of parts.

I must not attempt to show you how fitly the Object Lesson introduces every branch of natural science, geography, natural philosophy, chemistry, botany, zoology. It is indeed the scientific method applied to the beginnings of knowledge. Nor need this consideration deter any teacher from attempting it, for the scientific method is nothing else than common sense applied to the acquisition of knowledge. The teacher who is eminently successful in conducting a series of Object Lessons must have eminent gifts. But these gifts are in a degree possessed by us all, and will be eminently possessed by whichever of us will apply himself to their cultivation with eminent labour and self-denial.

In conclusion, permit me briefly to advert to an objection sometimes thoughtlessly urged against Object Lessons, to the effect that useless smatterings of science are taught. *Non multa sed multum*, says the objector. Of course when a

man hurls a Latin quotation at us we ought to subside; but what we ought to do and what we do are sometimes diverse from each other. In this case I shall try to stand up against the quotation. No fact clearly apprehended, whether a fact of natural philosophy, or chemistry, or botany, or psychology, is a smattering of science; nor do twenty nor fifty such facts constitute a smattering. They are the true beginnings of science. He is a smatterer who, without himself tracing the inductions, accepts from any source the generalizations of science, not he who is engaged in patiently collecting and considering the facts that are the foundation of all generalizations. For the life of me I cannot see that the quality of a generalization taken on trust much affects the folly—and shall I say superstition—of accepting generalizations on authority. He who believes that the *radii vectores* of the planets sweep out equal areas in equal times, because he has read that Newton says so, is much on a par with the man who believes that cucumber seed should be sown on St. Lawrence's day, because he has been told so, and is as an astronomer incalculably below the intelligent hind, who says the new moon returns every twenty-eight days, for I have counted, and I know; even though the latter has discovered an approximation to truth only, and the former may have learned his truth in the slightly modified form which would make it exact. And as for the Latin quotation, appalling enough if met in a lonely lane on a dark night, it will scarcely affright us here in broad daylight. In respect of science, no man can know *multum* who does not know *multa*. There is no eminent scientist who is not conversant with many sciences as well as great in one. A man may be a Latinist, and nothing else, a Grecian, and nothing else, but he cannot be an astronomer, a biologist, a psychologist, and nothing else. Surely those who speak of *multum non multa* as the guiding principle of a boy's education forget what is the obvious method of nature. She assails our ears at once with multitudinous voices. She unrolls before our eyes her brilliant scroll, written over with characters a thousand fold

more diverse than the logographs of Chinese literature, a thousand fold more mysterious than the hieroglyphics of Memphis and Thebes, a thousand fold more gorgeously illuminated than any mediæval psalter. On all our senses, and on all at once, myriad-formed external nature pours her odors, her sights, her sounds. Nor is this all. As when one rolls a rock into some dim abyss we hear uprising the clash and rumble and roar of the far-descending stone, so when nature drops a sensation into the depths of our being, instantly uprise the murmuring voices of reason, of judgment, of imagination, sounding ever nearer and ever louder the mysterious burden of the universe. Then, too, awakes all the strange inner world of emotion and of will that never, never can be lulled to sleep again. Surely nature does not say *non multa*. Again, the knowledge of many things, not much of one thing, constitutes the true preparation for life. If you can, teach a boy one thing only, and turn him adrift in the world. No matter how thoroughly he knows that one thing he will be found altogether unfit to play any useful or successful part amid the activities of this many-sided life. The maxim quoted is the result of an imperfect conception of life. While preparation for duty is general, many things must be taught. When the general preparation is complete, and a definite course of life is chosen, one line of study must be steadily and engrossingly pursued. Permit me to amend the maxim, and say *post multa multum*. And permit me, as my last word, to say, let him who aims at an education that shall be eminently practical not neglect to make diligent and wise use of Object Lessons, as of a most valuable and efficient means of intellectual culture.

CIRCULAR TO TEACHERS OF PREPARATORY CLASSES.

The following memoranda communicated by Professor Robins, of Montreal, to the teachers of preparatory classes, are recommended by the author of this book to the careful perusal and reperusal of all who are engaged in the occupation of teaching.

GENERAL.

1. Remember that, inasmuch as you are left very much to the guidance of your own judgment in the management of your class it is especially necessary to use all your observant and inventive faculties for securing the best possible result of your labour.

2. That best possible result is the thorough preparation of each of your pupils to prosecute his studies and perform all other duties well hereafter. The first aim is not a high standard of attainment, but a good discipline of mind and manner, so far as it can be attained with each little pupil.

3. Because the habits of thought and action that are earliest formed are the most persistent and influential throughout life, and because the imitative faculties of a little child are especially active and his nature peculiarly impressible, yours is the most important work done in school. It is difficult work, but, if well done, you deserve corresponding consideration and honor. If you do not get them now, yet, your heart and life being right in other respects, you will secure them hereafter.

4. As you are conducting, in common with other painstaking and successful teachers, a great experiment in the management of half-day classes with very little children, carefully observe whatever in your manner, or in the ingenious devices to which you will be led, makes for your success, practice it diligently, and tell of it to others.

DISCIPLINE.

There is no need of reference here to the mode in which the successful teacher, acquires ascendancy over each of her pupils by strength and consistency of character, by a loving heart, a kind manner, and a clear and vigorous understanding. All these things are presupposed in the successful teacher. When, as in my presence less than twelve months ago, a teacher says to a class: "I will look at the slate of no child out of place," and then in less than a minute does so, it is not surprising that her class despise her authority, and make little or no progress. One who can promise so lightly, and forget so readily, is fit for no important trust; certainly, not for that of the teacher. But there are many things, little in themselves, though important in their results on discipline, which are sometimes overlooked even by those who have all the essential elements of excellent teachers.

1. Consider well the disposition of a little child. He is active but undisciplined. He longs to know, takes great delight in learning,—he loves to do, takes great delight in putting his knowledge into practice. But then he has but little persistency and steadiness.

2. You must, therefore, when he is not at play, teach him constantly, or keep him doing constantly, and this with rapid alternations from the employment of his mind to the employment of his body.

3. So you must never be without a definite plan of action that shall engage the attention of every child. A half minute's embarrassment of the teacher in the presence of the class will work ruin in its discipline for the time being, and a child with nothing definite to do at any time during the school session becomes forthwith a centre of disturbance.

4. You must not put too prolonged a strain on the feeble power of attention in pupils of preparatory grades. Let your work be varied and your lessons short and lively. Let the teachers who will follow you in the school course have most

of the trouble involved in securing long-continued and concentrated attention.

5. Frequent change of rooms will much facilitate your work. In some schools visited there is not nearly enough of this. Your class should occupy two rooms during parts of every hour. This may compel you to change in the middle of a lesson, but you can so choose the lessons that the interruption will not be harmful.

6. Much aid to discipline is afforded by the drill of changing rooms, by the simple calisthenic exercises and by exercise songs. But this aid is only secured by the enforcement of prompt and exact obedience.

7. Hence the lightest tap of the bell should be followed by immediate and intense silence, not, however, permitted to continue long.

8. Hence also the first word of each command must be so chosen and given as to suggest invariably what is to follow; the next and finishing word of the command must be the signal for the prompt, universal, and therefore simultaneous execution of the command.

9. Hence also no second command should be given until the first has been universally and precisely obeyed.

10. Finally, the effect of each command must be minutely considered beforehand. For example, in a series of commands those first given should be those that can be executed noiselessly, the whole series being terminated by that one which necessarily involves disturbance.

TEACHING.

1. You must yourself be accurate. The distinction between the well educated and the imperfectly educated is just here:—that the one is and the other is not, automatically and minutely correct in recollection, in mode of thought, in manner of expression. I saw a teacher, printing on the black-board for the imitation of her class, make a small w thus, W. Do not teach anything that must be subsequently unlearned.

2. With little children, especially at the outset, much attention must be given to them individually. This, however, in many instances can be done so as to interest others not directly addressed, who may be appealed to, to give the information that their companion requires.

3. The effect of every collective lesson is greatly increased when every child attends to the whole lesson. But this attention can be secured only by making each child feel that in all you say you have reference to him.

4. Hence recitations and other exercises must not be wholly, nor even principally, simultaneous. No more convincing evidence of idleness or of inexperience, on the part of a teacher is needed than the general inability of a class to repeat individually, what in concert, or rather following the lead of one or two, they can, in sing-song style, deliver simultaneously.

5. In questioning a class you should not give it to be understood whether you intend to have the answer from the whole class or from any particular pupil until after your question has been asked and a momentary pause for reflection and recollection has been allowed. After the pause you may say, "John Brown," or "anyone" and then expect an instant answer. Thus you prevent one or two bright pupils suggesting the answer to all the rest of the class, and you secure the attention of each to the work in hand.

6. Take care that each child gets a fair share of questioning. Sometimes the teacher has a few names that somehow spring first to the tongue, and their owners get the lion's share of attention. When the teacher is conscious of this, let her make sure of each child occasionally by some such device as the following: Let the whole class stand, and as questions are answered by individuals, let them sit. Thus proceed until every child is seated.

7. Holding up the hand to indicate the wish to reply to a question is open to great abuse. Forward children answer everything. Timid or indifferent children answer nothing. It is a good rule that the hand shall not be held up except

when another pupil has made a mistake, or when the teacher, in asking a question that she thinks a little too hard for the class generally, gives special permission to raise it.

8. Rising from the seat, running after the teacher, thrusting the hand into the teacher's face, snapping the fingers, are highly improper acts, instances of each of which I have seen, as unfortunate efforts to attract the teacher's attention. At times the teacher by standing so that she cannot see the whole class, is the direct cause of such rudeness.

9. It is impossible to carry on work with the active co-operation of the teacher in two classes at once. Having given one class an exercise on the slates, or one of some other kind, that has been properly explained, that is within their power, and the result of which can be subsequently examined by yourself, bend your undivided attention on the other class.

10. In the examination of slate work it is, as a rule, better that children bring it to the teacher, than that the teacher go to examine it. Hence in every room pupils should be taught how, without marking time, or marching noisily, to move in single file before the teacher, showing work as they pass slowly, and then to return in order to their places, having completed the circuit of the room.

11. Home work is not needed in Preparatory Classes. It will much conduce to good order, therefore, if books, slates and pencils be always left in school under the care of the teacher.

MISCELLANEOUS HINTS.

1. Stand so that you can see all the children of the class, and so that each one of them can see, when necessary, what you do and how you do it. Sometimes it is well to overlook children from behind.

2. Be not noisy. Speak distinctly and quietly so that children will listen to hear you: do not shout so that they must hear you whether they will or no. Even if a busy hum of work (pleasant to hear) fill the room, do not raise your voice too much; call attention by a light stroke of the bell before

you speak, then speak in the midst of a profound silence. Pointers and rulers were not made for banging desks with. Teachers' feet have other purposes than stamping on the floor.

3. Be not fussy. Self-possession, that quickly takes note of all surroundings, and adjusts itself unruffled and without effort to them all, is the secret of easy government, as it is also the last refinement of the perfect gentleman.

4. Look out for short-sighted children, and for children who are hard of hearing. These physical imperfections are often unknown to the children themselves, and long escape the notice of parents and teachers. Unfortunately not only do they give an appearance of stupidity to children that are really bright, but they most seriously retard progress unless compensated by the considerate arrangements of the teacher. Let as many exercises as possible cause children to lift the eyes up from books to maps, pictures, objects at a distance and work done on the black-board, so that the tendency to short-sightedness may be, so far as possible, checked.

5. Embrace eagerly any opportunity that may be afforded you of visiting the classes of other preparatory teachers. I have seen some excellent work done in some of them, and in almost all the work is good. There is not a single class in which I have not seen at least one thing done so well that I could wish all other teachers of the same grade had opportunity to see it.

THE FRENCH GENDERS.

(IN APPENDIX TO CHAPTER VII.)

(Revised by Professor Darey, M.A., B.C.L.)

The Gender of French nouns must firstly, where possible, be determined by their

(A.) MEANING.

RULE I.—Masculines are Males, Months, Measures and Winds; Words not nouns but used as nouns, and Compounds of a verb.

RULE II.—Feminine are Females, Fêtes, Flowers in *-e mute*, compounds of a verb and of *-mi*.

In words not having these meanings (and also where the same word is used for Male and Female) the gender is known by

(B.) TERMINATIONS.

RULE III.—All are Masculine (including most of those in *-ge*, *-isme*, and *-iste*.)

except nouns ending in $\left\{ \begin{array}{l} -é, -ée, -ie, -ion, \\ -lle, -tte, -nce, -aïson \end{array} \right\}$ which are mostly Feminine. Also, most other nouns ending in *-e mute* are feminine.

(C.) MASC. EXCEPTIONS.

Arrêté, comité, Marché, été.

Café, congé, côté, Blé, dé, thé.

(D.) FEM. EXCEPTIONS.

(1.) Verge, image; Page, nage, cage.

Horloge, marge; Plage, rage, charge.

(2.) Chanson, croix, clef;

Dot, dent, eau,

Façon, foi, fois, forêt;

Fin, faim, peau.

Part, paix, poix;

Rançon, leçon, loi.

Mort, main, noix;

Nuit, soif, voix.

Vis, chair, boisson;

Cuiller, cour.

Vertu, moisson;

Toux, mer, tour.

and a few others not in very common use, e.g., liste (f.), piste (f.), forge (f.), &c., bastion (m.), bestion (m.).

(3.) Most nouns in *-eur*, mean "a man who does something" (e.g. 'acteur' a man who acts) and are MASC. by Rule 1. Also malheur, bonheur are MASC.

But nouns in *-eur* which mean a thing or quality, are mostly feminine. Such are

Ardeur, odeur, saveur, senteur;

Douceur, douleur, sueur, splendeur;

Les couleurs, candeur, clameur, chaleur ;
 Verdeur, vigueur, vapeur, valeur ;
 Epaisseur, hauteur, largeur, longueur ;
 Profondeur, grandeur, grosseur, longueur ;
 Pesanteur, pudeur, horreur, humeur ;
 Mœurs de rigueur, rougeur, rumeur ;
 Laideur, terreur, teneur, tumeur ;
 Liqueur, erreur, ferveur, fleur ;
 Fraicheur, froideur, fureur, peur.

After taking the Dictionary for half an hour daily, for a few days, and determining the gender of each noun as it comes, by the three Rules given above, quoting aloud the rule which applies in each case, the gender of the 11,000 nouns which follow these three rules, will be recognised almost instantaneously when we are speaking the language.

To the exceptions we shall still more readily assign the right gender, if we will learn them by heart, write them out once or twice from memory, and, once at least, write them out in a column with its meaning in English opposite to each word, and then repeat them aloud in a sort of sing-song every day for a little while.

They will probably be found easy to learn and hard to forget, for they are linked together by the strongest law of the Association of Ideas—that of Resemblance. The resemblances in this case are of Rhyme, Rhythm, and Alliteration, all three. In some cases there is an association also in meaning, as in *chair* and *boisson*, “meat and drink,” and where the feminine nouns in—*eur*, which implies size or extent, are grouped together in two consecutive lines, to wit:—

Epaisseur, hauteur, largeur, longueur ;

Profondeur, grandeur, grosseur, longueur.

A list of the few words that are Masculine in one signification and Feminine in another, such as *page*, *forêt*, *tour*, will be found in the grammar.

It will be seen that some nouns in—*e* mute are not provided for. Their number may be thus estimated. The French language, as now in every-day use, contains about 25,000

words. Of these nearly one-half, say 12,000 are nouns. The gender of 8,000 of these nouns may be determined unerringly by the three Rules and the 21 lines of exceptions given above. About 4,000 nouns end in *-e mute*. Of these about one-third are masculine. About half of these masculine nouns are either provided for by RULE I. above, or end in *ge*, *-isme*, or *iste*. Most of the rest have a foreign look and fall under the following Rule.

"Words which were Masculine or Neuter in Latin or Greek and are adopted into the French language with a termination in *-e mute* are masculine in French."

A similar principle explains *why* *croix*, *clef*, *foi*, *part*, *paix*, &c., &c., are feminine, *croix* being derived from the Latin word *crux* (fem.), *clef* from *clavis* (fem.), &c.

In any case if we have to use a word in *-e mute*, and do not instinctively assign the right gender to it, we shall be right five times out of six in making it feminine. Each careful student must make his own list of masculine words in *-e mute*, which (like *beurre*, *châle*, &c.) are in common use.

It may be well to give some examples of the application of Rules I and II which are 'Master Rules,' (or "Dominant Rules,") Rule III having no force when they can be applied.

In Rule I, Males are of course Masc. Thus 'un cornette,' 'an officer in a regiment,' is, of course, Masc., though *-tte* is one of the feminine terminations.

The word 'measures' refers especially to the words used in the French decimal system. Thus, 'centimetre,' 'kilogramme,' are Masculine.

Months and Winds are Masc. Thus we have 'Septembre,' masc.; 'bise' is an exception, it is fem. Examples of words which are not nouns used as nouns, are, 'le a,' 'le b,' and the other letters of the alphabet; 'le jaune' the color yellow; 'l'Allemand,' the German language; 'un beurré,' a pear, (adjectives used as nouns); 'le boire,' 'le quatre,' &c.

Compounds of a verb are Masculine, although their termination be feminine; thus we have *le porte-feuille*, *le parterre*, &c.

As to Rule II, females, like 'la jument,' the mare, 'la sœur', the sister, &c., are of course feminine.

Fêtes and Saint's days are feminine, the words *Fête de* being understood. Thus we have 'la Toussaint,' 'la St. Jean Baptiste.' 'Le Noël' alone is Masc. 'La Mi-mai' and other compounds of *-mi* are feminine. *Midi*, because derived from the masc. Latin word *meridies*, is masculine; but, for some reason the reader may puzzle out if he can, *après-midi* is feminine, Minerals and trees are mostly Masc., even when they end in *-e mute*, e.g. 'le frêne', 'le chêne'. Some flowers in *-e mute* and some mountains ending in *-e mute* are masculine. When they do not end *-e mute* they are masculine by Rule III, of course.

HINTS ON THE TEACHING OF ENGLISH GRAMMAR.

By R. W. BOODLE, B.A., Oxon.

There are few subjects in which less satisfactory work can be done with beginners than in the teaching of English grammar. This is mainly due to two causes: the anomalous state of the language, and the imperfections of actually existing text-books. On the one hand English still bears traces of having been a Synthetical language, while it is mainly in its present state Analytical. On the other, most of the Grammars in use refuse to recognize the fact, and are written upon a theory drawn from the study of Greek and Latin. For instance, because sex belongs to things, gender is too commonly attributed to the names of things. As a matter of fact, few nouns in English are gender-nouns like *son* and *daughter*. The majority are properly speaking neuter-nouns like *child*, *sun*, *colour*, i.e., nouns that belong to objects that have no sex or to animals of both sexes.*

Though grammar is both an art and a science, it is with its latter aspect that the teacher of English grammar is mainly concerned. The correct use of our language can only come from constantly hearing it used correctly, and from practice in speaking and writing. Though the study of English grammar *may* lead to greater accuracy in the use of English, it does not necessarily do so in all cases. "One must be a somewhat reflective user of language," writes Professor Whitney, "to amend even here and there a point by grammatical reasons; and no one ever changed from a bad speaker to a good one by applying the rules of grammar to what he said. To teach English grammar to an English speaker is, as it seems to me, to take advantage of the fact

* cf. Whitney's *Essentials of English Grammar*, § 115.

that the pupil knows the facts of the language, in order to turn his attention to the underlying principles and relations, to the philosophy of language as illustrated in his own use of it, in a more effective manner than is otherwise possible." Hence, it is English grammar as a scientific study that we mean when we speak of teaching it.

The first requisite of scientific teaching is clearness of conception. So, before beginning to teach English grammar, let the student think out for himself such questions as the following:—What constitute the essential qualities of the different parts of speech, and why do Grammars no longer recognize the Article as a part of speech distinct from the Adjective why should not *that* in "*that man*" be considered a Pronoun? What are the substitutes for all the different parts of speech (thus we have for the *noun*, adjectives, adverbs after prepositions, infinitives, clauses or phrases, a word of any kind)? For what others can any one part of speech stand (cf. the different uses of *many* in "*many* are called," "*a many* merry men," "*many men*" etc.)? What are the fundamental relations that exist between words in a sentence, and what possible relations can exist between each part of speech and each of the others individually? It is only after having carefully thought over English grammar in this way, point by point, and considered what the best authorities have to say upon the subject, that a student is in a position to teach others.

But how is he to begin to teach? Let him choose his text-book, and let it be a short one and as free as possible from internal inconsistencies, such as Morris's Grammar in the Series of Literature Primers. And let the Grammar be always studied along with reading or literature lessons. I can think of no better work as illustrating the way in which grammar and literature should be taught side by side than Hales' "Longer English Poems," the notes to which are full and admirable, alike from the points of view of grammar, philology, literature and history. To this work and to the suggested questions of which its notes are full I would refer

my readers as the best course of study for the young teacher. The book is a capital instance of *multum in parvo*. Meanwhile I would suggest a few fundamental rules of grammatical teaching:—

1. Though it may be convenient later on to regard the words "shall have been" as a single expression, beginners should always parse each word separately—*shall*, a verb of the present tense; *have*, an infinitive; *been*, past participle.

2. Only such inflected moods and tenses as are actually found should be recognized, such as *were* and *say* in "it *were* useless to *say*," the former a true subjunctive, the latter an infinitive governed by the preposition *to*.

3. If this principle be pushed to its conclusion, no Cases in nouns would be recognized except the possessive. There is an objective case in pronouns, but nouns have no objective case, though they may stand in objective relations—a variety of the relation called Government.

4. Greater simplicity is needed in parsing. There are four and four only relations existing between words in the English sentence, expressed by the following terms: Agreement, Government, Qualification (without either of the former), and Conjunction. These can easily be taught by means of symbols, and thus the relations between all the words in the sentence be made clear to the youngest pupil.

5. Let no words be supplied or "understood," as the expression is, unless they are shown to be required by the history of the language or can be supplied from the context. Thus to say (with Lennie) that *me* in "give *me* this" is governed by a preposition understood is a mistake; but it is not a mistake to supply a second *go* with *you* in "I go one way, *you* another."

6. Do not burden a pupil's mind with the names of a multiplicity of words and tenses such as you will find in Mason's Grammar. This is implicit in what I have said before, but it cannot be too much insisted upon. Where there is no attempt at agreement as to technicalities, you had better not use any at all.

CALISTHENICS.

One of the best means of reviving the attention of a class when it seems to flag was, to the best of our belief, invented by two of the best educationalists of this country at about the same time, by Mr. Irwin at Belleville, and by Professor Robins in Montreal. It consists of suddenly calling on the class, either (1) "at their places," sitting or standing, or (2) in "extension order," after moving to appointed stations on the floor of the room, to go through part of a series of calisthenic exercises to be selected for the purpose.

The word of command is given by number only. For instance, at the word "one" the whole class fold their arms; at the word "sixteen" the scholars link their hands behind their backs.

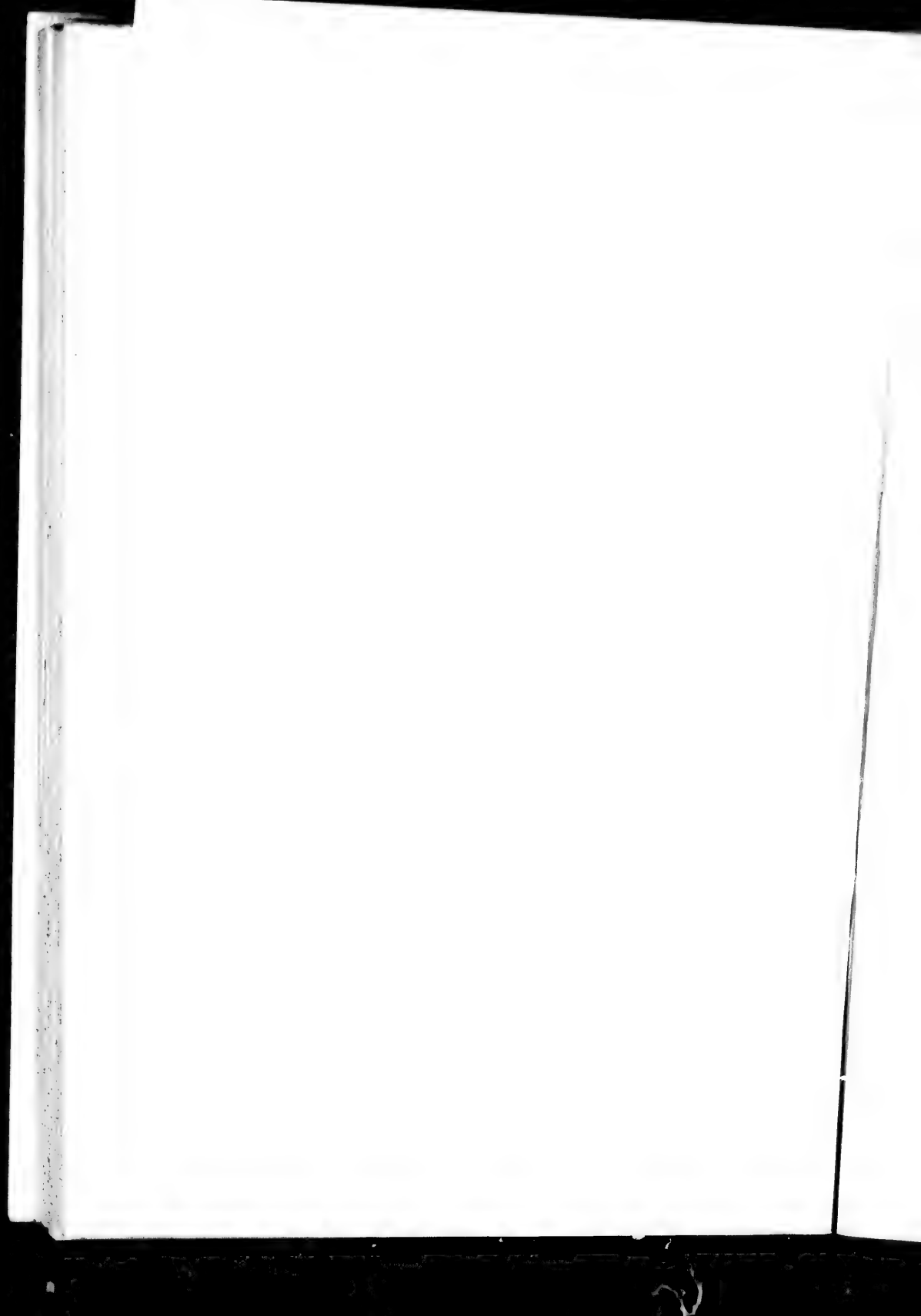
The following series of positions and exercises may be found useful. In it the class is supposed to stand facing the north.

POSITIONS AND EXERCISES.

1. Arms folded over the chest.
2. Arms down by the side, hands open.
3. The fists clenched and raised to the chin, knuckles outwards or facing north.
4. Fists clenched, thrown back to the shoulders, middle joint of fingers facing outwards or to the north.
5. Arms thrown out right and left, hands opened, palms outwards.
6. The hands swinging forward to the north till the palms meet, the arms being extended at full length.
7. Fists at the shoulders, clenched; knuckles facing right and left, (E. & W.) middle joints of fingers forward or to the north, elbows as far back, i.e. to the south, as possible.

8. Right fist, remaining clenched, darts forwards as far as possible.
9. Left fist the same.
10. Both fists the same.
11. Arms gradually bending, rise till the tips of the fingers touch the top of the head, the hands being arched, palms downwards.
12. The hands are raised as high as they will go, palms opened outwards or N.
13. Palms open on a level with the shoulders, thrown as far back (to the S. E. and S. W.) as the shoulder joints allow.
14. Arms thrown back, hands on a level with the waist, backs of hands meeting (or nearly meeting) behind the spine.
15. Hands behind the back, slightly curved; fingers and thumb of right hand grasping the finger tips of the left.
16. Arms folded behind the back.
17. Head bent downwards, fingers touching the toes.
18. Head downwards, hands between the legs, palms open facing S.
19. Right and left arms swing round alternately.
20. Both arms swing round together.

One good order in which these exercises may well follow one another is as follows:—2, 3, 4, 5, 6, 7, 8, 7, 9, 7, 10, 7, 11, 12, 17, 12, 18, 6, 13, 14, 6, 2, 19, 20. Positions 1, 2, 16, are good postures for a class during recitation, but none of them should be retained long enough to cause pain or fatigue. Position 15 is good for a troublesome class going down stairs or walking in single file. From 3 to 4, from 6 to 14, from 7 to 10 are excellent extension motions.





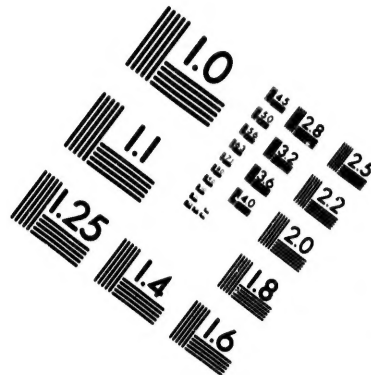
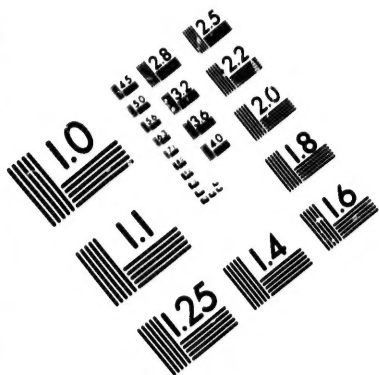
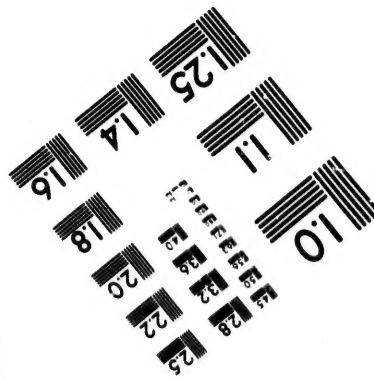
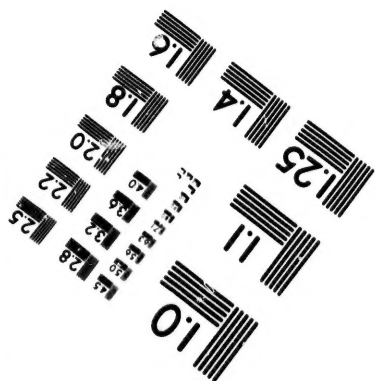
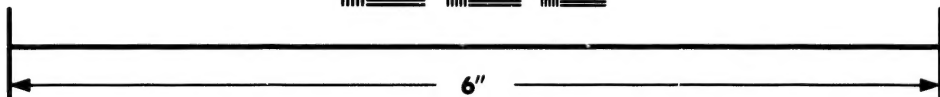
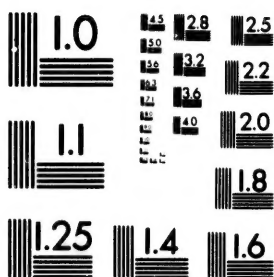


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